



**THE GREAT WELSH UNION SLATE COMPANY (LIMITED).**  
Incorporated under the Joint-Stock Companies Act, 1856.  
By which the liability of shareholders is limited to the amount of their shares.  
Capital £250,000, in 50,000 shares of £5 each.  
The first call of £3 10s. per share is payable on allotment.  
The Hon. W. H. YELVERTON, J.P., Whitland Abbey, Carmarthenshire (Chairman of the Provincial Welsh Insurance Co., Moorgate-street, London)—CHAIRMAN.  
Capt. DISNEY, 4, Park-terrace, Maida-hill West.  
GREGOR GRANT, Esq., 4, Great Russell-street (late Chairman of the Oriental Bank, Bombay).  
THOS. HUTCHINGS, Esq., 5, Adam-street, Adelphi; and Llandilo, South Wales; Contractor for Public Works.  
JOHN EDWARD PANTER, Esq., Fulham (Director of the St. George Insurance Company, Pall Mall).  
WILLIAM SHAW, Esq., 1, Kensington-park-terrace.  
JAMES WALTON, Esq., Clement's-lane, London; Dudley, Staffordshire.  
HENRY WARD, Esq., H.E.I.C.S., K1, Albany, Piccadilly.

**OFFICES OF THE COMPANY.—WALBROOK HOUSE, CITY.**

It is not anticipated that it will be necessary to make any further call within two years from the formation of the company.

Interest at 5% per cent. may be paid to shareholders upon advances made by them in respect of their shares beyond the amount of calls actually made.

Returns for the first two years ..... £20,505

Current expenses ..... £6,910

Leaving a profit of ..... £21,395

Being 50 per cent. upon the current expenses, or 25 per cent. upon the paid-up capital of £125,000, which will annually increase for many years.

Prospectuses and forms of application for the remaining shares in the above company may be obtained at the company's offices, or by letter, addressed to the secretary.

FRAS. CURTIS, Sec. P.T.

**THE LITTLE DOWN AND EBBER ROCKS MINERAL COMPANY (LIMITED).**

Capital £50,000, in 10,000 shares of £5 each.—Deposit £1 per share, and £1 on allotment.

**OFFICES.—44, LEICESTER-SQUARE, W.C., LONDON.**

Samples of the iron, lead, and copper ore, manganese, calamine, red and yellow ochre, and various other valuable minerals, recently obtained from the works of the mines, have been deposited at the Museums of the Geological Institutions in Jermyn-street, Bristol, and Liverpool. Samples may be examined at the office, as above.

Reports of the surveyors, and the results of several chemical analyses, together with prospectus, and all particulars, may be had at the offices, as above, or on application to the secretary.

By order of the Board of Directors,

CHAS. GOOD, Sec.

**SLATE SLABS AND ROOFING SLATES.—THE PROPRIETORS OF THE NEW MACHNO SLATE AND SLAB COMPANY (LIMITED) have, at great cost, made arrangements to convey their produce from their quarry near Ffestiniog to Conway, to obtain the great advantage of access to the railway, giving them the facility of executing orders without the slightest delay. They trust that making Conway their shipping port will not cause them to be confounded with those hitherto known as the CONWAY SLATES, as the MACHNO SLATES are ENTIRELY FREE from PYRITES, or any metallic substance liable to OXIDATION: and, from having been tested in Wales for at least half-a-century, are found to attain a degree of hardness, by exposure to the atmosphere, unknown in any other vein. The MACHNO SLABS are too well known to need comment, but the annexed valuable testimonial from Mr. Magnus, and also a strong chemical test to which they have been subjected, will better explain their quality:—**

**Plutico Slates Works, Upper Belgrave-place, London, April 7, 1855.—GENTLEMEN: I very readily offer my testimony to the excellence of your slates raised at the Machno Quarries. I prefer them to all others obtained in North Wales, with one exception, and that is much of the same quality as the Machno. The slates can be obtained of large sizes, and of every requisite thickness. They are homogeneous in texture, strong, of good colour, free from spots and other impurities, pleasant to the tool of the mason, easily planed and moulded, and will bear exposure to a much higher degree of heat than slates from any of the Carnarvonshire quarries.**

Signed, G. E. MAGNUS.

**To the Proprietors of the Machno Slates and Slab Quarries.**  
Liverpool, Oct. 18, 1855.—DEAR SIR: The experiments which I have tried on the specimen of slate, in reference to its capability of resistance to acids, enable me to pronounce it in every way capable of retaining boiling vinegar, without injury either to its own substance, or to the contained vinegar. A piece of the slate, weighing 25 grs., was exposed for 25 hours to the action of cold strong nitric acid; it was then boiled in the same acid for 50 minutes, and when washed, dried, and weighed, was found not to have lost perceptibly in weight. This I consider the most conclusive experiment.

Signed, GEO. C. HUSON.

Wm. Orme Carter, Esq., Machno Slates and Slab Company.

All communications must be addressed to the resident director, Mr. T. H. WELLS, Conway, North Wales.

**ECONOMIC LIFE ASSURANCE SOCIETY.**

6, NEW BRIDGE STREET, LONDON.  
CHAIRMAN—HENRY FREDERICK STEPHENSON, Esq.

DEPUTY-CHAIRMAN—ROBERT BIDDULPH, Esq.

**ADVANTAGES.—Mutual assurance.**  
The lowest rates of premium on the mutual system.  
The whole of the profits divided every fifth year.

An accumulated capital of ..... £1,375,000  
During its existence the society has paid in claims ..... 1,455,000  
Recovery bonuses have been added to policies to the extent of ..... 590,000

The last bonus, declared in 1854, averaged 57 per cent. on the premiums paid, and amounted to ..... 397,000

Policies in force ..... 7,437

The annual income exceeds ..... 240,000

The next division of profits will be made in 1855.

Assurances effected prior to Dec. 31, 1855, will participate in the division of 1854.

Prospectuses and full particulars may be obtained on application to

ALEXANDER MACDONALD, Sec.

**NEW PATENT ACT, 1852.—Mr. CAMPIN, having advocated Patent Law Reform before the Government and Legislature, and in the pages of the Mining Journal, &c., is now READY TO ADVISE AND ASSIST INVENTORS IN OBTAINING PATENTS, &c., under the NEW ACT.**

The Circular of Information, gratis, on application to the Patent Office and De-signs Registry, 156, Strand.

**THE ENGINEER** of Friday, 5th June, contains.—Fairbairn and Newton's Waste Silk Dressing Machinery, Bachofner's Lamp Shades, Ermen's Machinery for Finishing Yarns, Strutt's Mode of Transmitting Power, Maynay and Whitehead's Mode of Damping Paper, Fenton's Railway Signals, Allan's Permanent Way, Todd's Power Looms, Burnap's Pump, American Machine for Making Wrought-Iron Railway Chairs, all illustrated. Original Articles on the "Dip" and the "Davy," the Enfield Rifle Factory, Kensington Museum, Steam Locomotion on Common Roads, Penal Servitude, &c. Parliamentary and Law Intelligence, Report of Trials of Boydell's Traction Engine, Machine Made Locks and Keys, Conclusion of Mr. Bink's Paper on Iron and Steel, with Discussion; the President's Address to the Institution of Civil Engineers of Ireland; Prof. Ramsay's Paper on Certain peculiarities of Climate during part of the Permian Epoch, and Numerous Miscellaneous Articles; Patent Journal; Timber and Metal Markets; Trades, Birmingham, Wolverhampton, and other Districts; Notes from the Eastern Counties; and all the Engineering News of the week. 24 pages, Price 6d.; Stamped, 7d. Vol. I., Price 15s.; Vol. II., Price 16s., may now be had ready bound.

Bernard Luxton, Publisher, 101, Strand.

**INVESTMENTS IN BRITISH MINES.**  
Full particulars of the most important Dividend and Progressive Mines will be found in the Fourth Edition of

**BRITISH MINES CONSIDERED AS AN INVESTMENT,**  
Recently published, by J. H. MURCHISON, Esq., F.G.S., F.R.S.

Mr. Murchison also publishes a QUARTERLY REVIEW OF BRITISH MINING, giving, at the same time, the Position and Prospects of the Mines at the end of each Quarter, the Dividends Paid, &c. The REVIEW for the Quarter ending the 31st of December last contains a Map of the Camborne District, price 1s. Reliable information and advice will at any time be given by Mr. Murchison, either personally or by letter, at his offices, 117, Bishopsgate-street, Within, London, where copies of the above publications can be obtained.

**OPINIONS OF THE PRESS.**

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—Mining Journal.

The book will be found extremely valuable.—Observer.

A valuable little book.—Globe.

A valuable guide to investors.—Heraphat.

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—Morning Herald.

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—Morning Chronicle.

Of great value to capitalists.—Sunderland Times.

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—Leeds Times.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—Derby Telegraph.

To those who wish to invest capital in British mines, this work is of the first importance.—Welshman.

This work enables the capitalist to invest on sound principles; it is, in truth, an excellent guide.—Plymouth Journal.

All who have invested, or intend to invest, in mines, will do well to consult this very useful work.—Ipswich Express.

This is really a practical work for the capitalist.—Stockport Advertiser.

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide.—Warwick Advertiser.

It is full of carefully compiled and reliable information relative to all the known mines in the United Kingdom.—Sheffield Free Press.

Those interested in mining affairs, or who are desirous of becoming speculators, should obtain and carefully peruse the work.—Monmouth Beacon.

Every person connected with or who thinks of connecting himself with mining speculations, should consult this book.—North Wales Chronicle.

A very valuable book.—Glasgow Examiner.

All who have invested, or intend to invest, in mines, should peruse this able work.

We believe a more useful publication, or one more to be depended on, cannot be found.—Plymouth Herald.

Mr. Murchison will be a safe and trustworthy guide, so far as British mines are concerned.—Bath Express.

is deserving the attention of every one who seeks profitable investment of his capital.—Brighton Examiner.

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—Folkestone Herald.

**THE IMPERIAL ROYAL MINISTRY OF FINANCE** intends to surrender, in the way of SALE to private enterprise, the GOLD and SILVER MINING WORKS, situated at Bockstein and Rauris, in the high mountain chain of the Duchy of Salzburg, together with the recently established SMELTING HOUSES, for the reduction of silver, copper, and lead, constructed at Gend; furthermore, the GOLD MINING WORKS at Zell, in the Valley of the Ziller in Tyrol, either separately or together, with all the PRIVILEGES, LANDS, and USUFRUCTS pertaining to these mountain operations, dwelling-houses, farming and manipulation establishments, the whole of the working gear, engines, crushing, washing, and amalgamation apparatus, roasting houses, blast engines, saw and grinding mills; and materials of every description, provisions, and implements of all sorts. The complex of the works situate in the Duchy of Salzburg comprises the following properties and possessions:—

	Bockstein.	Rauris.	Gend.	Together.
Mass of mines	16	23	—	39
Dwelling-houses	6	3	5	18
Farming and manipulation establishments	39	24	20	83
Engines and manipulation works	24	8	1	33
Joch kl.	Joch kl.	Joch kl.	Joch kl.	
Gardens, arable and meadow lands	26,717	18,961	15,056	60,764
Mountain pasturages	272,1167	—	—	272,1167
Reservoirs of water (ponds)	0,110	—	—	0,110
Grass pasture	213	0	95	0
				309 0
That of the Zelle Gold Mining Works consists of—				
Mines of	6	2	7	
Dwelling-houses	—	—	7	
Farming and manipulation establishments	—	—	7	
Engines and manipulation works	—	—	7	
Plots of land	3241 1/2 joch.			
Total	75,143 fl.	82,469 fl.	97,937 fl.	14,911 fl.

The estimated value of these objects for sale, with all appurtenances, made in the course of the last two years, amounts to—

	Bockstein.	Rauris.	Gend.	Zell.
Subterranean mining	—	28,000 fl.	—	—
Surface buildings	24,356 fl.	24,180	55,142 fl.	1,196 fl.
Apparatus, inside works	15,300	7,040	9,500	2,681
Plots of land	5,655	3,403	3,315	480
Rights of pasture	1,012	64	—	—
Working materials	21,000	15,300	14,300	10,602
Stores of provisions	1,300	500	700	—
Inventory of implements	6,000	6,000	15,000	552

Total ..... 75,143 fl. 82,469 fl. 97,937 fl. 14,911 fl.

Parties desirous of becoming purchasers are, therefore, invited to inspect the mining and smelting works thus offered for sale, to obtain for themselves all necessary information from the Imperial Royal Boards of Works, duly instructed to meet the master courteously; or, with respect to the Salzburg Works, from the Board of Management of the Mining, Forest, and Salt Works, in Salzburg; as regards the Gold Mining Works at Zell, from the Board of Management of the Imperial Royal Mining and Salt Works in Hall; and thus afterwards enter into immediate negotiation with this Imperial Royal Ministry of Finance, who will appoint a commission for the purpose. The Imperial Royal Ministry of Finance allows on the 1st of August—with all those parties who up to that time shall have announced themselves as desirous of entering into negotiation for the aforesaid sale—the negotiation to be opened by the commission appointed for the purpose, with each candidate individually, and reserves to itself the right of ratification of the articles of agreement most advantageous to the treasury, after the most gracious approval of His Imperial Royal Apostolic Majesty. Reference is hereby specially requested to the imperial patent (degree) of the 24th October, 1855, whereby the obligation for the delivery of the gold and silver, obtained by mining and washing operations, into the custody of the Imperial Royal Treasury Office, was rescinded, and consequently, a perfectly free disposal of the precious metals obtained was conceded to private mining works.

Vienna, May 8, 1857.

WEST OF IRELAND MINING COMPANY (LIMITED).

Under Act 19 and 20 Vic, c. 47.

Capital £50,000, in 50,000 shares of £1 each, to be paid on application for shares, and the balance of 15s. at the expiration of two months from the date of allotment.

The capital to be increased, as the works progress, by subsequent serial issues of shares. The holders of the first issue to have the right of pre-emption of the shares to be afterwards issued.

DIRECTORS.

## MEMS. OF MINES AND MINERS—No. VI.

ROBERT WOOD FOX (Falmouth).—Science owes much to this great name, but the county of Cornwall, particularly the mining population, owes more. The name of Fox has long been associated with mining interests. To this noble family of philosophers, philanthropists, and geniuses, both male and female, is justly due the deepest gratitude of Cornishmen. Their charity is proverbial, their abilities quotation, and their fame world wide. To them Cornwall is indebted for the germ of her noblest, most useful, and best institution—the Royal Cornwall Polytechnic Society. Their energy made the little grain spring up into a great tree, and is one principal reason why Falmouth was selected as the locale of their Hall. Having paid this just tribute to the family, we will now direct attention to the merits (would we could do justice to them!) of the illustrious individual who is more immediately the subject of our paper. This worthy is well known in the annals of science and mining. Few persons have devoted so much liberality in purse or time to the development of Nature's great arcana connected with the lodes of Cornwall, as Mr. Fox. He reasons upon cause and effect, and philosophically reasons—if the effect be seen search for the cause, and then you may reason truthfully on other similar causes as to their effects, though they be not seen. Under these impressions, having detected voltaic electricity in several lodes in the county, Mr. Fox, at his own expense, instituted a costly series of experiments, conducted principally by the subject of a previous "Mem." (W. J. Henwood), to ascertain if this law were universal in certain situations, or only partial, or if by a series of experiments from this source it could be ascertained whether a lode contained metalliferous deposits at all, or in proportion to the agency developed. A noble thought, and one every way worthy its author and investigator, although as yet unsuccessful. After the vast improvements that have been made in electro-magnetism within the last 30 years (the time that has elapsed since these experiments were made), who knows what may not be accomplished, and that Mr. Fox's experiments may not yet succeed? The author has heard Andrew Crosse, of Taunton, the eminent electrician, declare his firm conviction it would eventually be found correct, and regret that he was not a young man, to undertake the charge of so grand an investigation. Mr. Fox's experiments, as well as Mr. Crosse's, in forming miniature metallic veins by voltaic electricity are well known. His contributions to the pages of the *Transactions* bear ample testimony to his zeal, his ability, his perseverance. Of his worth the county testifies with one accord, but his private charities, and they are not a few, are only known to the recipients: he is one of those who "do good by stealth, and blush to find it fame."

ROBERT HUNT.—It would not only be a breach of etiquette, but a dereliction of duty, were this justly celebrated individual not to be mentioned as a philosopher, a miner, and a man of sterling worth in every sphere of life. To his industry and ability alone he owes his present pre-eminent position. Mr. Hunt, in early life, practised the comparatively humble profession of a chemist and druggist, in which capacity he soon distinguished himself by his extraordinary experiments and researches, and a peculiarly happy way of illustrating them in popular lectures. He was one of the founders of the Penzance Mechanics Institution, at the meetings of which the eloquence and forcible reasoning of Mr. Hunt always commanded a full audience, much to the gratification and instruction of his hearers. Associated with him were the late J. Beckerleg, J. B. Jordan, and a few kindred geniuses. Before he left Penzance to join those higher paths of science he so ably treads, he witnessed that institution flourish in an unexpected degree. The Royal Cornwall Polytechnic Society, of which he was an early medallist, found in him an able discoverer, contributor, and demonstrator, of some of the most subtle of Nature's wonders. His successful experiments on daguerreotypes, in Talbotypes, and similar then astonishing processes, soon brought his name prominently before the public; but his wonderful researches upon the laws of light, and the divisibility of rays, stamped him as a philosopher, and a man of profound study. His papers and lectures on these subjects soon commanded attention, and gained him the friendship and patronage of the most illustrious names on the page of science. It being universally declared that the records of the mining interests of this country were not only kept in a careless and neglected manner, but that it was absolutely necessary they should be placed under the surveillance of some scientific person, who could and would render a satisfactory account, the well-known talents of Mr. Hunt, his celebrity for clearness of demonstration, his order, regularity, and, withal, his urbanity of manner, pointed him out as the man. An experience of many years has proved the choice was worthy the judgment. The mining records of this country, for correctness, for statistical compilation, and for arrangement, may vie with those of any country in the world. To persons unacquainted with the subject it may appear to have been an easy task—not so, however, to those who do know. It has been an Herculean undertaking—"where all was chaos, all is light." In the first place, had not Mr. Hunt been half a miner, and a man of high standing in the world of letters, he could not have obtained or understood the information he has elicited from the agents of mines in the various localities; for, though many of them are high-minded, liberal men, who will convey any information required, yet, in the aggregate, they are a curious body to get what they deem secrets out of. Many are jealous of rival mines, others are ashamed to acknowledge the poverty of their produce, and some from disinclination, would not give the desired data. By his kindness, attention, visiting the localities, reasoning on the folly of withholding such useful and instructive information, Mr. Hunt, at considerable self-sacrifice and unparalleled industry, has overcome and removed all prejudice; they who withheld are now proud to contribute to anything he may require, evidently showing we have, at all events, in this instance, got the right man in the right place, which we hope he will long live to adorn, except he be promoted to some higher sphere, where his splendid talents may be made available for greater works than that of keeping mining records (no mean or easy task, as we have shown) afford him the opportunity of doing. Mr. Hunt's urbanity to strangers is the subject of remark by every one who has the honour of an introduction; he so readily entertains any subject laid before him for advice, or question, and explains it in so friendly and kind a manner, that he wins the affection and respect of the applicant. The writer has often heard a rough mine captain exclaim, on leaving Mr. Hunt's presence, "Is it possible that is the great Mr. Hunt? I will send him all he wants to know, I am sure." To scientific works Mr. Hunt is an able and liberal contributor; his industry is exemplary, his kindness proverbial, and his abilities acknowledged and appreciated. We repeat, long may he enjoy them, to his family's highest gratification, and his country's honour and benefit!

J. B. JORDAN.—Although this gentleman is not a Cornishman or a regularly constituted miner, yet his long residence among them, his peculiarity of taste, his devotion to their interests, and his endeavours to improve and elucidate their machinery, fully entitle him to be included in the list of Cornish worthies. Mr. Jordan settled in Penzance about the year 1830 as a teacher of drawing and painting, in which capacity he displayed considerable ability, and met a corresponding encouragement. But Nature will out. He was never meant by the great Architect to be a mere teacher of painting. His mechanical genius prevailed over long; he produced some mathematical and philosophical instruments of surprising workmanship and extreme delicacy. The establishment of the Royal Cornwall Polytechnic Society soon gave Mr. Jordan an opportunity of displaying his extraordinary mechanical powers. His ingenious plan for the ascent and descent of miners displayed considerable skill, particularly in its adaptation to under-shafts; its costliness was its greatest drawback. Mr. Jordan also exhibited a novel and simple mode of reversing steam machinery, at that time a novelty. He also exhibited many well-executed working models of the various mine machinery in his neighbourhood. The extreme delicacy of his electrometers and galvanometers were the subjects of frequent remark. Mr. Jordan is the inventor of several very ingenious and useful machines, amongst which the pentagonal carving-machine is a most remarkable one. At the Museum of Economic Geology, the many models of Cornish steam machinery (un-equalled in execution) testify to his ability as a mechanist, and to his attention to the most minute details of their intricate construction. These working models are the admiration of all visitors; an examination of them will satisfy anyone that Mr. J. B. Jordan's abilities deserve a record amongst our mining "Mems."

FURTHER DISCOVERIES OF COAL IN IRELAND.—At Upper Church, near Thurles, County, a newly-discovered coal mine, on the property of Mr. R. Armstrong, Medifffe, is now being worked under the management of Mr. R. Millet, G.E., Millbrook; and although the shaft is sunk but 60 ft., considerable quantities of coal and an extensive coal bed have been met with.

## Original Correspondence.

## LUND HILL EXPLOSION, AND VERDICT OF THE JURY.

SIR.—The summing up of the coroner was but a repetition of the evidence of Messrs. Wood, Elliott, and Woodhouse, after they had examined the colliery, and which distinctly proved that the much-vaunted system of ventilation was unequivocally bad, and that even the imperfect rules which were in existence had been greatly neglected. Although the immediate cause of the explosion remains a mystery, the inadequate provisions against danger are too glaring to render the occurrence of that dreadful calamity a matter of surprise.

The coroner's jury say that they cannot come to the conclusion that it was caused by criminal neglect, but accidental; at the same time, they condemn the laxity of the discipline, and non-observance of rules. The jury also concur in the opinion expressed by the three engineers mentioned—that an improved system of ventilation, as well as safety-lamps, ought to be resorted to. They recommend that efforts be made to educate the miners, and conclude by the expression of an opinion that the owners were not cognisant of the laxity of discipline which prevailed in the colliery. From the premises, the jury could scarcely have arrived at a more "lame and impotent conclusion."

It is passing strange, too, that in an investigation of such vast importance the evidence of Her Majesty's Inspector of Mines for the district should not have been taken. He might, or at all events ought to, have been able to have thrown some light on the original or the progressive cause of this dire calamity; and have told us whether he was aware that the colliery was in the state described, and which has been so strongly reprobated by the eminent engineers examined at the inquest. If he were cognisant of this state of things, it would be important to know what measures he took to remedy it; and if he were in ignorance of these alarming circumstances, how was it that he should remain so, whilst the state of the mine seems to have been so notorious in the neighbourhood?

If the mode of investigation pursued at this inquest is to be taken as precedent, it will establish the principle that no one can be held responsible for these terrible events, unless it can be proved that "RECKLESS, IGNORANT COLLIER" actually did the mischief, although the ignorance of the owners and agents is held to be a sufficient excuse. OBSERVER.

June 3.

## SLICKENSLIDES.

I do not remember to have seen any notice of these curious formations in any scientific work, though almost every miner must be conversant with them; I think, therefore, a little attention bestowed on the subject may not be uninteresting or uninteresting.

These remarkable formations are found on the walls of lodes in the clay-slate (kilas) formation (I do not recollect ever having seen any in granite, they certainly do not occur in the limestone, millstone grit, or hazel formations). They assume a variety of singular appearances; in some they are corrugated as regularly as can be conceived, resembling in some degree fossilised wood, such as is frequently found in coal pits; in others they are regularly striated; others resemble planed iron before it is polished, the mark of the tool, as in the latter, being just barely perceptible; others again are perfectly smooth and bright. Their colour is also as various as their form, from a beautiful rich brown to black, and in some few instances they are quite bright, having a brilliant, shining, metallic lustre.

A fine example of the corrugated brown series was shown in the Great Exhibition of 1851, from the Pencorse Mines, near East Wheal Rose; this was a large specimen, and was peculiarly perfect and bright. Similar pieces of it have been procured, but of a smaller size; the striated may be procured at Wheal Rose, near the Loe Pool, Helston, an old lead mine;

the plain black may be found in many mines in Cornwall; the bright metallic lustrous was frequently met with at Wheal Langford, near Callington.

I have also seen fine instances of it at the Dhoon Mine, Isle of Man.

My attention has been drawn to the subject in preparing the "Guide round the sea-coast for visitors." I find in reading my notes, made some years since when exploring, the following remarks:—"Here (Bellurian, or Treanance Bay) are to be seen slacksides, on the south side of the Bellurian lode; care must be taken to break them, when good specimens may be procured. They stand nearly perpendicular, and are evidently in this instance caused by the disturbed state of the ground." These notes, I find by subsequent enquiries, are pretty nearly correct, as applied to all slacksides; for I do not recollect to have seen them at any very great depth. I have observed them so close together as barely to be able to put a knife edge between, and I have seen them many feet asunder, with the body of the lode between. At Bellurian there are three or four series of them on the south side of the great lode, but I could not trace them off on the north, the great quantity of sand probably preventing it; this place is close by the junction of the clay-slate with the conglomerate, at the commencement of the serpentine formation; there are three or four elvan courses, a north and south lode, and these slacksides occur near the junction. Can it be possible these have been formed by the attrition of the rocks one against the other? If so, how comes the enamel-like lustre on the face of the stone, frequently having the appearance of being highly polished with black lead, and in a few instances almost as bright as silver? If any work or paper has been published on this subject I should like to see the author's views, as well as to receive any information from some of your numerous scientific readers. I presume one of the advantages to be derived from the Journal is the discussion and elucidation of such phenomena as are met with in our peregrinations.

I ask for information, and in due time will give my own views of the matter; but if your correspondents will oblige and assist me, I think we may be of mutual benefit. I wish to ascertain the following particulars:—Have they been seen in granite or greenstone? whether accompanied by flocks or not? whether in a compact or rough lode, and, if so, where? whether the lode in the neighbourhood has been hoisted by a caunter, or the ground otherwise disturbed? and at what depth the lowest has been observed? whether they have been seen in tin, copper, or lead lodes?

GEORGE HENWOOD.

## PRACTICAL MINING—THE "DIPPING NEEDLE."

SIR.—Knowing that most subjects connected with mining are ably discussed in your Journal, I forward the following facts, which I believe will prove interesting to the scientific reader, and valuable (as a guide) to those who are practically engaged in engineering operations.

The difficulties which exist (to a greater or less extent) in underground operations, owing to magnetic disturbances affecting the magnetized needles used in surveying mines, and which frequently (though quite unintentionally) cause such great errors in the sinking of shafts, &c., can now be entirely removed by means of the "dipping needle," invented by Mr. R. W. Fox; and the amount and differences of magnetic intensities and variation to be determined as accurately underground as above, and (where required) the true polar position determined.

The dipping needle will, at the same time, serve to determine the magnetic intensities in mines producing different minerals, and will serve to show that all minerals when in their native lodes are charged either with electro-magnetism, or magnetoelectricity. Also many of the most interesting problems now before the scientific world may be in a great measure solved by the assistance of this invaluable but hardly appreciated instrument, particularly those pertaining to magnetism, electricity, and galvanism—sognates, though perhaps not always equally perceptible. By these means, also, many of the theories propounded by Mr. Evan Hopkins, and satisfactorily proved by Mr. Fox, can be most clearly demonstrated.

This is not a mere theoretical statement, but one founded upon actual observation in mines in the neighbourhood of this town within the past three weeks—the Perran St. George Copper Mine and Wheal Jane, producing different minerals, such as mica and tin.

As particulars of the observations made may be of service to your readers, I will forward a statement of them for your next Journal, being convinced that a more extended knowledge of this instrument will be most beneficial to the mining interests.

Yours, June 1.

THOMAS DAWBORN.

## PURCHASING MINING SHARES.

SIR.—I was delighted by your leader of last week, in which you show the Londoners how they shall become mine shareholders without risk or bother. We do not want them to have either without they like it. Let them buy shares of us at a fair price, and we will take all the risk, all the trouble, and all the annoyance; but "we cannot have the cake, and eat it too." I, for one, hold many shares in dividend mines, but they have cost me a lot of money; and as I must live (the dividends will keep me, and handsomely too), I cannot afford to venture very much further until I realize some of the shares that have cost me so much. Now, the London market is not at a fair price—dividend mines are at too low a figure.

I for one have ventured, and will do again, from the surface, I trust with similar luck, success, judgment, or what you please to term it, but I will see where my money is laid out, and take care by whom. I will also take care to be not far from the spot, to occasionally ask questions, and examine for myself as well as by paid agents.

I latter myself I know something about working a young mine, and do not wonder at people being afraid of "up the country" and London boards of management, too often composed of gentlemen who invest, but do not attend, or of men of straw who dare not. I know two properties now, in which the board of one consists of six gentlemen and the secretary, neither of whom knows anything of mining whatever, being perfect novices: in the other, the agent is really a clever man, but is so cramped and hampered by the "committee's orders," that the poor devil has no chance whatever to work his mine properly—it is playing Hamlet with the principal character omitted.

To conduct a mine through its leading-strings is the greatest difficulty: after it once becomes dividend, or even able to pay its way, all is easy enough. London ad-

venturers lose their temper and confidence at the same time, when a call is made; it is not their profession, but ours—so they had better take your advice, and buy dividend mines. Let young mines be to miners—they will work and manage them properly, and when in a fit state will be glad, for a consideration, to hand them over to the moneyed men for investment.

If your suggestions be largely followed, we shall hear fewer complaints against mining, as I know, whether they do or not, that more than half the difficulties impeding young mines occur from the mismanagement of boards of management, committees, &c., formed of the inexperienced in these matters. Let them invest their money in legitimate undertakings (as dividend mines are called), and leave the development of mines to miners.—June 1.

M. S.

## RATING OF MINES.

SIR.—Despotic Russia and absolute Prussia, and all the other non-constitutional states of the Continent, are in every way relieving mines from paying any government or parochial dues; and even Spain, which is allowed by all parties to be so backward in all fiscal regulations, possesses a mining code which would not disgrace the most enlightened country of civilised Europe. The legislators of those countries are perfectly aware that the fostering of mining enterprise, which in many cases is a hazardous undertaking, and in every instance requires a considerable outlay, is always a considerable source of wealth to any country; and if encouraged, must become a portion of the national property.

Let it not be supposed that the thinking portion of the House of Commons are not aware of this fact. Our representative Government is the best in the world: nevertheless, it has many great faults, and the collective wisdom displayed is far from being infallible. One great defect of this, as well as of all other popular assemblies, is that too much talk is allowed. Men can indulge in orations, and get committees appointed, not only for useless, but at the same time noxious purposes. A remarkable instance of this we have seen in the Cornish Members. I lay no blame on Mr. Nicholas Kendall for endeavouring to acquire a quasi notoriety by being chairman of a committee in the House of Commons: this is somewhat higher than the quarter sessions; although here his absolute wisdom may be commented upon, while in the country there are probably no records kept as to how many times he committed himself or others while on the bench. Judging from his position, I presume he must have been of the "great unpaid," known alike for their contempt of justice, ignorance of law, and dogged obstinacy. Another is Mr. Michael Williams, who has obtained all his wealth from miners in two ways—what he has gained as a miner, and then his profits as a smelter. When a few lords are to be conciliated, we forget the means by which we attained eminence, despite our plain origin, and strive to become a part and parcel of a landed and starched aristocracy, who despise us for daring to intermix with them, but consider us agreeable if we give good dinners and lend money. A third is Mr. Richard Davey, whose parish is rather poor, and there are a number of persons there not depending upon mines, who have to be supported by the parish rates when they become infirm and past labour. I am not about to infer but that these three gentlemen are very estimable in their several capacities—the one as a sharp trader, the other two as country squires; but the electors and those connected with mining made a great mistake when they returned them as their representatives in the House of Commons. The exhibitions made last year show that legislature was not their vocation, and that we ought to have had a new "pare."

While the duties on mining are being relaxed in all other countries, it must appear strange that England, which was the first country not only to inaugurate, but likewise to carry out free trade, should now be attempting to levy dues on that which is a great source of her prosperity, and one of the sinews of her power. I will ask one simple question—When once the lord's dues are rated to the poor, what will be the answer he will give, if required to reduce them? It will be this—I must pay a certain amount to the poor-rates, and it is now out of my power to afford you any relief. The mischievous tendency of this I will not now dilate upon, and other considerations I shall defer until a subsequent communication. In the mean while, I would enquire what the committee who professed themselves to be friends of the miner are now doing? To my thinking, they appear to be indulging in a sort of lethargic slumber, and our inactivity may be the triumph of our foes. If they do not do their duty, it is our province to work single-handed: if they do so, let us aid them by all the means in our power. In the mean time, but a single task remains for all connected with mining, both in London and all the metalliferous districts, and that is—agitation and petitioning, so that our voices may be heard, and produce a salutary effect.—Redruth, June 3.

## CAPT.

HORIZONTAL WINDING ENGINES.

SIR.—Referring to the enquiry of Mr. W. Oliver, as to the makers of the horizontal winding engine adverted to by Mr. Gregory in his lecture in the Bristol Mining School, as reported in your Journal of May 9, I would direct his attention more closely to the remarks of the lecturer, when he will observe that it is to no superior quality of workmanship, but the principle of construction to which the lecturer calls attention—the employment of two cylinders, the cranks being fixed on the shaft at right angles, thereby obviating the necessity of the fly-wheel. This principle of construction is so common at all engineering establishments that Mr. W. Oliver may rest easy in the assurance that the lecturer did not mean to call down special praise upon the makers of this particular engine, but merely referred to it as forming one of a class whose principle of construction he considers to be the best.

The objection of the lecturer to horizontal winding engines is founded much more on theory than on practice, as their almost universal adoption in different parts of Lancashire and elsewhere would seem to point out. A mere inspection of the long lists of horizontal marine engines, of thousands of horse-power, must satisfy the most obtuse that the advantages gained by their use far outweigh any objection as to increased wear and tear. In my opinion, it is of far more importance in a winding engine that the drum should be fixed on the crank shaft, and that the employment of second motion shafts, driven by wheels, should in all cases be avoided. Moderately short stroke winding engines are preferable to long strokes, as, instead of having the piston travelling through the extra space of the long stroke, you increase the diameter of the shorter stroke, so as to render the consumption of steam equal in both, and thus give the engineer a more perfect command over the engine, practically if not theoretically.

Referring to the lecturer's predilection for quick winding, the firm to which I belong lately erected a small horizontal winding engine, 26 in. cylinder, and 4½ feet stroke, 12 ft. drum on crank shaft; this engine can easily wind from 40 to 50 tons of coal per minute from 100 fms. pit.—June 1.

WIGAN.

## [ADVERTISEMENT.]

## MINING INVESTMENTS—IMPORTANT TO CAPITALISTS.

SIR.—Owing to an accident, I was obliged to return from my tour of inspection through Devon and Cornwall sooner than I intended. Being now partially recovered, I take the earliest opportunity of laying before the public a list of the Cornish and Devon Mines I visited during my late round, on most of which I am at liberty to furnish full reports, for which I charge 2s. 2d. The second list I send you are mines seen by me at different periods, when I formed my opinion as to results, since which time I have narrowly watched their reports, and am now prepared to give general hints as to their future prospects, accompanied with my views on many other mines that I have from time to time surveyed at surface; for the latter list I charge 1s. 1d. Particulars requiring a full report of any mine in the first list will get report and this list for 2s. 12d., accompanied with a letter of general remarks, or my views on the formation of metallic substances in lodes, and the gossans on the back of them, with other useful hints for legitimate shareholders, showing how to detect mines that are expensive and unfairly dealt with, as I am now prepared with a list of the expenditure, even to every individual employed on mines, including running materials, new machinery excepted; and I have no hesitation in publicly stating that where mines exceed my estimate, something is going wrong—this I have openly observed to the managers on the mines, and have but seldom failed in discovering the origin of the

of the earth, now rich in gold-bearing deposits—the “diggings” of the modern world. The quartz veins now worked in California have not been subjected, or only partially, to this fusing process, and consequently the gold they contain is still in a great degree latent and invisible. Mr. Squire’s mode of operation appears to me to be strictly analogous to that of Nature. He makes the gold matrix disclose its metallic contents by an agent resembling, and possibly identical with, that employed in the laboratory of Nature; he forms, in fact, minute nuggets in and upon the quartz; and the rest of much importance; I have the slightest possible acquaintance with Mr. Squire, but I am sure it is the duty of the companies interested in gold quartz mining to bring his principle, without delay, to the test of a practical solution.

—A SHAREHOLDER IN GOLD COMPANIES.

## Meetings of Public Companies.

### THE CARNARVONSHIRE SLATE COMPANY.

An extraordinary general meeting of proprietors was held at the offices of the company, Guildhall-yard, on Tuesday.—Mr. Pool in the chair.

Mr. TARR (the secretary) read the notice convening the meeting.

The CHAIRMAN said he should propose that the meeting be adjourned, as he had only been recently elected director, and was not sufficiently acquainted with the affairs of the company. He wished particularly to let the shareholders know that they ought to be present and look after their own affairs. He had visited the quarries at his own expense, and taken a party with him to report upon them, but he had no confidence in his statement, and wished them to be inspected by a competent quarryman, as he was of opinion the concern was in an excellent position, and only required additional capital. The object of the meeting upon the present occasion was to extend the powers of the directors, to enable them to raise 10,000, and the attempt to raise the money in the present state of the market at 5 per cent. had failed.

Mr. MAXTON said he had travelled 40 miles to attend the meeting, and it seemed rather hard that he should be obliged to go back without doing anything. As a circular had been issued and had not brought the shareholders together, he wished to know how they intended to get a larger meeting.

The CHAIRMAN considered they had a valuable property, but he did not wish them to take his opinion. He wished it was better known to the shareholders and the public, and, if inspected by a sound practical man, he believed the money would be advanced immediately.

Mr. GRIEVE said they had better pass the resolution, as they could not act upon it until confirmed at a second meeting, of which it was necessary to give one month’s notice.

Mr. GRIEVE moved and Mr. MAXTON seconded a resolution, that the powers given to the directors by the resolution confirmed on the 11th March last (authorising them to raise the sum of 10,000, on debentures at 5 per cent.) be extended, to enable the directors to raise such sum, or 5000, part thereof, on such terms as they shall think fit.—Carried unanimously.

Mr. TIMOTHY TYRRELL explained the position of the quarry, and he believed the necessary works could be completed for 2000.; and before six months they would be in a dividend-paying state.

A vote of thanks to the Chairman terminated the proceedings.

### NEW FORT BOWEN GOLD MINING COMPANY.

The annual general meeting of the proprietors was held at the offices, New Broad-street, on Thursday, Capt. CHARBIE in the chair.

Mr. PENNINGTON read the notice convening the meeting, and the following report:—

Agreeably with the 12th clause in the Articles of Association, the directors beg to submit their report upon the progress made since its formation.

The company was duly registered under the Joint-Stock Companies Act, 1856, and obtained the Certificate of Incorporation on the 29th day of December last. At the earliest possible moment after the formation of the company, the directors proceeded to the appointment of a manager, who would be fully competent to report upon the possibility of erecting water-power machinery, and to construct the same, if, after investigation, it was deemed advisable. After much enquiry and consideration, an engagement for twelve months was entered into with Mr. Henry Clemes, a gentleman of great practical experience in gold mining, and well known to a West Indian climate, to proceed to the mines as manager. He, together with a staff of officers and men, consisting of an engineer and surveyor, a medical officer, a blacksmith, a carpenter, and two miners, arrived at the mines on the 5th of March last. Up to the present time, the directors have received two communications from Mr. Clemes, and a report from Mr. Blee, their engineer and surveyor, showing the advisability of making the water course; unfortunately, however, there has not been sufficient time for an estimate, giving in detail the cost of the necessary works, and the time it will take to construct them, to be prepared, but it is roughly calculated by Mr. Blee, that they can be made for the sum of 3000. Respecting the value of the mine, Mr. Clemes, up to the date of his last report, had not had an opportunity of operating upon any of the lode stuff, so as to admit of his giving an opinion; but, in consequence of the old workings having run together, or become filled up through the falling in of the hill side, he had been obliged to commence a new level; and by the mail due the middle of this month, we expect to receive an account, showing the yield of one month’s work upon the ores, from which an estimate can be formed of what may be expected when the mine is fully opened, and the water-power machinery set to work.

The directors beg to draw the attention of the shareholders to the important fact that there are no outstanding debts, and that all the capital at their command can be entirely devoted to the carrying out of the two great operations requisite—the erection of the water-power machinery, and the opening of the mine. The amount of capital not yet called up, the calls due, and the debts owing to the company, amount at the present time to 4530., a sum, it is assumed, that will be enough to do all that will be needed; besides which there will be, it is probable, some remittances of gold, which have not been taken into account in the above sum. The directors, therefore, recommend that the necessary works should be proceeded with, unless future advice should show that the funds of the company are insufficient, and in such a case it will be their duty to call you together, to consider what will then be the best course to take. The directors have much pleasure in stating that the medical officer’s reports upon the climate and the health of the staff are very satisfactory, and that no sickness of any moment has occurred since he arrived at the mine.

The audited balance-sheet to March 25 will have shown you the financial position of the company. Since the formation of this company, the sum of 100. has been received on account of the old company’s debentures, to which your sanction is requested.

A statement of accounts was submitted, from which the subjoined is condensed:—		
Capital, including debentures	£19,666	2 6
Discount	16	19 8
Interest, &c.	90	4 10
Sundry creditors	244	3 9
Mine cost	£16,232	6 0
Interest on debentures	282	5 10
London expenses	378	9 3
Travelling expenses	1,221	0 7
Sundry debtors	691	11 9
Bills receivable	192	5 9
Cash in hand and on the way	325	1 3
Balance in favour of mine	£ 94 10 4	

Mr. BAKER (the solicitor), in explanation of the accounts, said the new company was not liable for the item 8017.11s., as the parties had not taken up the shares.

The CHAIRMAN said, that if the water-course was made, a great saving would be effected, and they would be enabled to drive 100 head of stampa at the same cost as was now incurred annually for driving 12 heads. Capt. Clemes was of opinion that the only way to work the mine was by water-power. They had a water-wheel out at the mines, and ample machinery.

The report and accounts were then unanimously adopted. The retiring directors and auditors were re-elected—Mr. Whitecock, in the room of Mr. James Clay, M.P., who had resigned, and Mr. Charles Powell, of the firm of Powell and Cooke, as a new director.

The proceedings terminated with a vote of thanks to the Chairman.

### AUSTRALIAN FREEHOLD GOLD MINING COMPANY.

An extraordinary general meeting of proprietors was held at the London Tavern, Bishopsgate, on Thursday.—Mr. A. WARRAND in the chair.

Mr. PULFORD (the secretary) read the notice convening the meeting, and the CHAIRMAN the following report:—

The shareholders are aware that since the last meeting, held on April 3, 1855, this mine has been in Chancery. In pursuance of the resolution of the shareholders, passed on Jan. 15, 1855, that the affairs of the mine be wound-up, and a return of 6s. per share be made to the adventurers, which resolution for winding-up was confirmed by another meeting of adventurers held on March 15, 1855. Negotiations have been carried on from time to time between the plaintiff, Mr. W. A. Clarke, and the committee of management; and the committee have acknowledged that it has not been the fault of Mr. Clarke that matters have not been arranged. Mr. Clarke has asked that all the funds of the mine should be reasonably divided amongst the holders of shares, and to this the committee of management were agreeable, but from circumstances this was found to be impossible.

The number of shares on which 6s. per share has been returned amount to 63,230, leaving 10,465 outstanding. It is, therefore, suggested that the proceedings in Chancery should be discontinued, and the funds be paid out of court, out of which the costs of the plaintiff should be first paid, the defendants paying their own costs; and the 6s. per share on the shares on which the 6s. have not been paid, and the balance be divided equally amongst the holders of the shares on which the 6s. have been returned.

The assets, except the land in Australia, and a debt which is partially secured, were paid into the Court of Chancery to the credit of the cause instituted by Mr. Clarke, the same amounting to the sum of 3574. is still in the Court of Chancery.

Your committee have to inform you that upon one of the applications in the suit made to the Vice-Chancellor, it was intimated by His Honour that the subject of the suit should be settled out of court. Your committee, from the time of such intimation, have endeavoured to ascertain the opinion of the shareholders, and they now venture to believe that the holders of the majority of shares concur in the recommendation of His Honour. This opinion your committee have represented to Mr. Clarke, and he assured them that his only object in establishing the suit was to secure the due administration of the assets among the shareholders; and as your committee have satisfied Mr. Clarke that such is their desire, as well as that of the holders of the majority of the shares, they have urged upon him the very great sacrifice, arising from the continuance of the litigation in Chancery. To these representations we trust that Mr. Clarke will attend. By this course, the great expenses of litigation will be stayed in a mode satisfactory to the shareholders. Undertakings similar to that in which we are all shareholders, when involved, are of themselves sufficiently disastrous, but when the losses are aggravated by legal expenses all suffer.

The CHAIRMAN, in moving the adoption of the report, expressed his thanks for the readings with which Mr. Clarke had come forward. It was intended first to pay the 6s. to those who had not received it, and afterwards to divide the difference amongst the shareholders after payment of the costs, but at the same time that item was so uncertain that it was possible instead of having to receive they might have to pay.

Mr. TIMOTHY TYRRELL hoped that after paying the 6s. they would still have something over, although at the same time it was well known that law costs were very uncertain.—The report was then unanimously adopted.

The CHAIRMAN then proposed the following resolution:—“That Mr. W. A. Clae

the plaintiff in the Chancery proceedings, be requested to comply with the terms of the conditions for a settlement of the affairs of the mine, as set forth in the report that this meeting have adopted, and in so doing the meeting expresses its thanks to Mr. Clarke for the readiness which he has hitherto manifested to see a just distribution of the assets of the company amongst the shareholders.” Carried unanimously. It was stated that out of 60,000 shares the representatives of 45,000 were in attendance. A vote of thanks to the Chairman terminated the proceedings.

### PENINSULAR AND ORIENTAL STEAM NAVIGATION CO.

The thirty-third half-yearly meeting was held at the offices of the company, Leadenhall-street, on Wednesday.—Sir JAMES MATTHEW, Bart., M.P., in the chair.

Mr. C. W. HOWELL (the secretary) read the notice convening the meeting.

The CHAIRMAN said the report was already in their hands, and he should not detain them by any observations, but trusted the favourable aspect of the company’s affairs would long continue. (Cheers.)

Mr. HOWELL then read the following report:—

THE COMPANY’S FLEET.—The present number, stations, employment, and other particulars of your vessels, will be seen as usual on reference to the prefixed list; the changes that require notice being, one ship lost, one purchased, and two contracted for. The *Madrid*, which was unfortunately wrecked on Feb. 21 last, by striking on a sunken rock at the entrance to the harbour of Vigo, was an iron vessel of 300 tons, built in 1845, at a cost of 17,000., and this has been reduced, by the operation of the percentages set aside annually for depreciation and insurance, to so small a sum, that the loss of this vessel will not materially affect the proprietors’ underwriting account at the end of the year. The ship purchased, the *Ottawa*, is a screw steamer of 1100 tons, and 200 horse-power, built two years ago for the Canada trade, but afterwards employed in the transport service in the Black Sea. On the termination of her engagement to the Government, she was offered to the company on moderate terms, and being a vessel that can be advantageously employed on the company’s commercial lines in the Eastern seas, or in the mail service as a reserve ship, she was bought. The adaptation of her cabins and fittings to the company’s purposes being now completed, she will leave for India on the 6th proximo. The two vessels contracted for are the *Cyclone*, of 2300 tons, and 450 horse power, and the *Grenada* of 800 tons, and 150 horse power. The *Delta* will be launched in about a month, and ready for sea in September, and the *Castile*, which has been lengthened 30 ft. amidships—an alteration which will greatly increase her passenger and cargo capacity—will also be ready for sea in about two months. These two vessels will form an important addition to the company’s available fleet; and on reference to the list of ships building, it will be seen that the directors are making due provision in other respects, to meet fully the increasing traffic on the India and China lines. In their last report the directors referred to the despatch of the *Alma*, *Aden*, *Ava*, and *Azof* to the India and China stations, and they have now the satisfaction to announce that the three first named vessels reached their respective destinations in safety, and are now in active service. The *Azof* on her arrival at Mauritius, was chartered by the contractors for the mail service between that place and Aden, also allotted to *Aden* in the last report, and is now running on that line, which is already becoming of importance in bringing additional traffic into the company’s main line.

THE TRANSPORT SERVICE IN THE EAST.—The *Precursor*, *Poltiager*, and *Chasseur* were

stated, in the last report to have been engaged by the Indian Government as transports, for the purposes of the expedition to the Persian Gulf, then preparing. Since that time the *Sir Jamsetjee Jejeebhoy*, the *Haddington* (sailing ship), and the *Oriental*, have also been chartered and employed in operations connected with the Persian war. The services of the *Bentinck*, *Aden*, and *Bombay*, have likewise been temporarily availed of for the conveyance of troops and despatches; and it affords the directors much satisfaction to state that the mail service has suffered no interruption in consequence of these extensive demands on the company’s resources.

THE SEMI-MONTHLY LINE WITH CHINA.—The intention of the directors to establish a semi-monthly line between Liverpool, the Straits, Hong Kong, and Shanghai, was announced in the last report. The arrangements then referred to were completed early in the spring, and the second line was opened in correspondence with the steamer which left Southampton on March 20. The state of affairs in China makes the re-establishment of a fortnightly communication with that country a matter of much public importance, and the directors trust the result of the working of this commercial line may be such as to enable them to continue it throughout the year.

THE RECENT ISSUE OF NEW SHARES.—By this operation, which has been successfully completed, the directors have redeemed a pledge given to the proprietors in the half-yearly report of May 1855—namely that the balance of new shares remaining on hand after the allotment at par of the 20,000 new shares created in the early part of that year, should be dealt with for the general benefit of the Company. The residue of these shares on Jan. 1 last was 5764, and the option of taking them up with 10s. paid, at 3s. premium, was freely responded to by the shareholders, the total amount applied for on these terms being 10,420. The available number was therefore apportioned rateably among the applicants, and a fraction of only 96 now remains, dependent on the replies of the proprietors in India. A fund of 17,000., having thus been realised, the directors propose to add thereto a sufficient amount from the general earnings of the half-year to admit of the payment of 15s. on every paid up or 30s. share, and 3s. on every new or 10s. share, in addition to the dividend hereafter recommended; this will give every individual of the proprietors a due proportion of the benefit arising from the disposal of the 5764 shares referred to, while the company are placed in the advantageous position of having the whole 20,000 new shares duly entered on the share register with 10s. paid.

DEATH OF MR. JAMES HARTLEY.—The directors have to perform a painful duty, in advancing to the death of Mr. James Hartley. The connection of this gentleman with the company dated from its formation; his kind-hearted and generous disposition was well known and experienced by an extensive circle of friends; and, by his sudden and unexpected demise, the proprietors have lost a most faithful and zealous supporter of their interests.

DIVIDEND.—The directors have much satisfaction in stating that up to the date of this report the operations of the current year had been successful; they therefore recommend that a dividend at the rate of 3½ per cent. be now declared for the half-year ending March 31 last, making, with the payment above referred to, 5 per cent. on the share capital; and that these payments be made together, clear of income-tax, on and after the 26th inst.

THE CHAIRMAN said he would now move that the report be adopted, at the same time he was quite open to hear any suggestions that shareholders might offer.

Mr. LEWIN, in seconding the resolution, wished to know the value of their ships, as it was important to be informed that the dividend was not paid out of capital. He also would be glad to know whether their ships were properly valued, both in this country and India, and whether there was a probability of an immediate call upon their 10s. shares.

Mr. ANDERSON (a director) said the cost of vessels must depend upon circumstances; they might as well ask to estimate the value of the British navy. So far from attempting to pay dividend out of capital, if they had erred it was on the other side. (Cheers.) It was impossible to answer the question as to the call; but, according to the accounts, there was no chance of its being very early. The depreciation fund was ample to keep the vessels in repair, and they had also an insurance fund. At the present meeting it was not required to produce the accounts; but he trusted that they had confidence in the directors. (Hear, hear, and cheers.)

Mr. PARRY said he had been a shareholder from the commencement of the company, and the admirable way in which the affairs had been conducted must meet with the approbation of the proprietors. He was satisfied, from personal investigation, that the depreciation fund was ample for its purpose, the maintenance of the fleet in an effective state, and at their full nominal value. He gave the directors great credit for their successful management, the result of which was evidenced in the very favourable report presented, and the satisfactory dividend announced. (Cheers.)

Dr. BRATTIS said, while he congratulated his co-proprietors and himself on the continued prosperous state of the company, and thanked the directors for their careful management, he was anxious that the public—those unconnected with, perhaps unimixed to, its interests, should not be in any way with the notion, that the shareholders were now about to receive 5 per cent. from the profit of the working of the company, because, as the report showed, that was not the case. The dividend from the profits was about 4½ per cent., the remaining ½ being return premium levied on the last issue of new shares; and he should like to hear some explanation given on what principle that arrangement was made. He admitted most readily, that had the directors followed in the wake of directors of other joint-stock companies, they might have retained the premium, and placed it to the credit of the reserved fund, or otherwise employed it for the general benefit of the company, but as they explained that it would be returned, and he found his proportion of the 15s. on the old, and 3s. on the new, left him 15s. deficient in the amount of premium he had paid, some of his fellow shareholders had benefited at his expense. It might be said that the market value of the new shares was fully equal to the amount levied by the directors, and that he sold them he should not suffer loss; but this reply, he thought, would not be made by the directors, because they did not legislate or arrange with the view of enabling the shareholders to traffic in shares. He believed they desired, as he did, to consider the property as an investment; and it might be well to explain on what principle of equity the arrangement alluded to, whereby certainly some shareholders benefit at the expense of others, was conceived and carried out.

Mr. WILLCOX, M.P., said the principle upon which the depreciation fund was formed, was supposing a ship to have cost 80,000., 5 per cent. was set aside on that amount for the first year. If she earned 3000. in the year, 5 per cent. was set aside in the following year upon the cost, & so on every year; and thus, besides providing the means of keeping her in repair, at the end of 14 or 15 years a sum was accumulated sufficient, with the produce of the hull, to replace her. These observations applied to the *Madrid*, which was lost, she was about 12 years old, and consequently, as stated in the report, the loss was very trifling.

The report was then unanimously adopted, as also a resolution confirming the dividend and bonus at the rate of 5 per cent., free of income-tax, for the half-year, payable on and after June 26.

Mr. NICHOLSON, referring to a letter recently published by

## MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WARY CONSOLS.—I observe that there are various opinions expressed respecting this mine in your Journal. Being in its vicinity last week, inspecting the Elmina and the Arundel Mines, I rode over to Wrey, which I found to be situated north-east of Elmina, on a parallel lode, and not on Elmina lode, as reported. I like her position, and prefer it to being on Elmina lode. I found a shallow lode driven into the hill a few fathoms on a large lode, dipping south about 4 ft. in 6, rather hard; mixed with it is a quantity of sulphate of zinc, commonly called black lead, the whole of which is impregnated with copper and lead—in fact, there are good veins of copper in it. Below this level they have sunk a winze about 6 feet, where the lode presents much the same appearance. This lode does not nearly produce enough of the ore: tons of stuff have already been raised, containing copper, zinc, and a little lead. I did not see the captain, but I beg to inform him that he is fortunate in having opened on such a lode; and whoever attempts to depreciate this property does so from either envy or ignorance. It has ever been my principle to support legitimate concerns, and expose illegitimate practices, which is my motive in this instance.—N. ENNER: June 1.

WHITECHURCH CONSOLS.—I note the remarks on this sett in your last Journal. They seem to consider themselves very fortunate in being so proximate to the Devonshire Great Consolidated Mines and Bedford United. Only seven miles of road separate them. Devon Great Consols party may have paid 20,000, to a man a Turner.—N. ENNER: June 4.

PENOCHE CONSOLS (St. Endor).—We hear from good authority that the company purpose sinking the eastern part of this mine immediately to the depth of 40 or 50 fathoms below the present level 45 below the adit—a wise resolution, when it is remembered that the Old Shepherd and the East Wheal Rose made little or no progress, except jack, above the 60. A good augury for their success is the fact that the smelters are complaining that the Penoche jack is getting too ready. If that be the case, they have only to procure one of Vian's separators, and the smelters will be accommodated, and the Penoche shareholders enriched, as very many tons of lead are sent off in their jack, for want of machinery to extract it. The cost of the machine is trivial: it would pay for itself in six months, as well as make their jack worth 10 per cent more.

BAMFYLDE MINES (North Molton).—A change in the management of this mine has taken place, and we understand that it has been decided to sink the mine vigorously forthwith. The sanguine views of the late captain have not been maintained: hence the want of confidence (though no doubt given honestly). The company have a balance in hand of considerably above 10000£, with the returns of 1000£ in sight, will enable them, now they have so curtailed their expenditure, to make considerable progress in these promising mines.

WEST SORTRIDGE CONSOLS.—A company is in course of formation for the purpose of re-opening this sett, and which was worked for a short time by a company whose operations were reluctantly suspended, in consequence of many of the shareholders being unable to keep up their calls, although the mine at the moment operations ceased looked very encouraging, and with every prospect of soon making at important discoveries. The mine is situated in the parish of Whitechurch, Devon, adjoining the well-known Sortridge Consols, and in the immediate neighbourhood of North Wheal Robert, both of which are valuable and greatly improving mines. Capt. Pryor, in reporting upon the mine, says: "I must again refer and urge upon the necessity of continuing the 10 fm. level to the junction of the copper lode and the cross-course. The stopping of the bottom of the 10 fm. will speak for itself, as I will pay well for taking away. The machinery is in good working order, and the water in fork, so that there will be no difficulty about commencing operations again." Capt. Joseph Richards says: "We are also now in a position to stop the bottom for 10 fm. The 10 east should be driven by a full force of men for the intersection of copper lode at junction, and the cross-course ahead. The new company will be divided into 6000 shares, upon the Cost-book Principle. A large number of the old shareholders have again joined the adventure, and it is expected in a short time the mine will be vigorously prosecuted, and with a little patience good results obtained."

QUEEN OF DART MINE (Ashburton).—A large number of shareholders in this company attended at the mine on Tuesday. This quarterly meeting caused some excitement, as the experiment of selling shares, under a novel law of the company, upon unpaid calls, was to be tried. Shortly before the sale, it seemed that a large number would have been offered, but the morning of the sale brought nearly all the unpaid calls, and only about 30 or 40 had to be offered, evidently to the great disappointment of many who attended prepared to purchase largely. The reports of Capt. Danstan, as well as of the captain of the mine, gave general satisfaction, who, pointing to the discovery of the champion south lode, and the opening up of the Queen lode in the eastern hill, where they are both expected to be worked very cheaply, inspired every person with the greatest confidence. The floors were covered with 30 or 40 tons of copper ore, which will be soon sent to market. This quantity would have been largely increased, had there not been some difficulty with the tributaries. The meeting passed on most satisfactorily, and we do not remember ever to have seen one more unanimous to work with vigour and perseverance this promising mine, replete with machinery, and containing very large known masses of copper ore.

NORTH WHEAL BUSY is much improved in the 10 fm. level east, the lode being 3 feet wide, and will turn out 3 tons of good quality ore per fm., worth 8£ per ton; and good results are anticipated as it nears the cross-course. The stratum of ground is also much changed, which is considered very favourable.

NORTH EXMOUTH MINE.—A company is in the course of formation to work this property, which is situated to the north of and immediately adjoining the Exmouth and Adams. In this district the elvan courses are decidedly the leading features and the primary cause of lead deposits. It is believed that no mine will fail to become profitable in that district whose situation is properly selected with reference to the run of the porphyritic dykes, or elvan courses. The sett comprises the lodes of two lords, and is held upon leases for 21 years, at 1-14th dues, and embraces an extent of not less than 450 fms. on the course of the lead lode, and double that distance on the course of the copper lode. Capt. J. Hampton has reported favourably on the property. The company is proposed to be divided into 6000 shares of 12s. each, and to be conducted upon the Cost-book Principle.

GRANAT CARADON (St. Ives), it is expected, will eventually prove a good copper mine, as the lodes of the celebrated South Caradon are supposed to run direct through the entire length of the seat.

WEST EDWARD.—An article in your last Journal awards to Captain East all the praise for the manner in which this mine is "laid out." Now, in justice to Capt. Thomas Carpenter, this erroneous statement should be corrected. The mine was in bad hands for some years previous to Capt. Carpenter being placed there as manager, and with the strenuous efforts of the Gunnis Lake and Tavy took alike combined they failed to discover the Arthur north lode. Capt. Carpenter became manager in February (I think), 1854, and immediately commenced operations on the north lode, by contouring, and cut the lode in the first pit sunk, which is now the diagonal, or principal shaft on this lode. He continued sinking on the course of the lode, although for the first 14 fms. or so no lode was visible—merely a division in the rock. During the sinking of these 14 fathoms the former and many other agents inspected it, and pronounced the sinking a waste of money, &c.; but when the lode opened out larger, and began to make ore, peace was for a time restored. Captain Carpenter planned the present workings, laid out all the surface works, including the dressing-rooms, &c., and has made Arthur pay nearly 8000£. in dividends.

WEST PROVIDENCE continues to open well, and is likely to be a good mine. CARROLL.—In driving the cross-cut from the adit level at Michell's to intersect Shepherd's lode, they have very recently cut a new lode, having a different bearing, 16 to 18 in. wide, with a leader of lead 6 in. wide, and they are now proceeding the cross-cut beyond; as Shepherd's lode, it is confidently believed, must be a few fathoms only ahead. In the 70, at Dabuiz's, they have also intersected the lode in the short cross-cut, it is 16 in. wide, with a leader of ore 4 in. thick. The sampling on Thursday next, it is expected, will exceed 70 tons.

SOUTH LADY BERTHA COPPER MINE.—A company has been formed to work this property, which is situated in the parish of Buckland, Devon, adjoining to, and parallel with, Lady Bertha, and surrounded by the productive mines of this scattered district. There are three lodes running through the entire length of the seat, intersected by cross-courses, and imbedded in a highly metalliferous clay slate. Capt. W. Goss is appointed the managing agent. Capt. John Lean, in reporting upon the mine, states that it is about 260 fms. south of Lady Bertha and Tavy Consols Mines, in western boundary being the river Tavy, from which an abundant supply of water for machinery and all other purposes could be obtained. The shaft is sunk on the north lode, and opened at the surface eastward, at different points from which some very pretty stuff has been raised, now lying at surface. Taking the ground on all its bearings, he considered it deserved a spirited trial, which could be done at a moderate outlay, as water machinery only would be required. The company is divided into 6000 shares, upon the Cost-book Principle.

## CORNISH STEAM-ENGINES.

Abstract from *Brown's Cornish Engine Reporter*, No. 123, for April:—

## PUMPING ENGINES.

Number reported .....	22
Average load per square inch on the piston, in lbs. ....	15-9
Average number of strokes per minute .....	5-7
Gallons of water drawn per minute .....	5337
Average duty of 10 engines, being million lbs. lifted 1 ft. high by the consumption of 1 cwt. of coals .....	65-4
Actual horse-power employed per minute .....	897-4
Average consumption of coals per horse-power per hour, in lbs. ....	3-4

## ROTARY ENGINES.—WHIMS.

Number reported .....	17
Number of whims drawn .....	28,040
Average depth of drawing, in fms. ....	157-5
Average number of horse-whim whims drawn the average depth / consuming 1 cwt. of coals .....	56-3
Average duty of 7 engines, as above .....	18-7

## STAMPS.

Number reported .....	5
Average number of strokes per minute .....	9-7
Average duty, as above .....	45-2
Actual horse-power employed per minute .....	16-0

## PUMPING ENGINES DOING HIGHEST DUTY.

Powey Consol, 56 in. single .....	Million lbs. 93-0
Par Consol, 80 in. single .....	90-2
Pembroke and East Crinnis, 80 in. single .....	88-9
Pembroke and East Crinnis, 70 in. single .....	73-6
Par Consol, 72 in. single .....	67-9

## WHIM ENGINES.

Powery Consol, 22 in. double .....	Million lbs. 31-5
Par Consol, 24 in. single .....	23-7
Powery Consol, 18 in. double .....	16-8
South Caradon, 30 and 16 in. Sims's combined .....	14-0
South Caradon, 26 in. single .....	45-2

\* TAPPING'S PRIZE ESSAY ON THE COST-BOOK SYSTEM, enlarged and augmented, with Notes and an Appendix, can be had at the MINING JOURNAL office, 26, Fleet-street.—Price 6s.

## THE MINING JOURNAL.

## GOVERNMENT SCHOOL OF MINES.

The continuing lecture was on the "Ores of Antimony." Mr. Warington Smyth observed, that of this mineral the ores which were found in greatest quantities were those of the sulphure of antimony, or grey antimony, or antimony glass; native antimony crystallises in the rhomboidal form: it is of a tin-white colour, but becomes tarnished by exposure to the air. It is rarely brittle, but easily fusible, and breaks with a steely colour, something similar to good grey cast-iron. It is not found in any abundance, and is met with at Andreasberg in the Harz, at Sahlberg, in Sweden, and Alemont, in France. White antimony, and blue antimony—sometimes called valenitine—crystallise in the prismatic form. Often the crystals are found columnar, and in spherical masses, these diverging in many instances from the centre. Hardness, 3 to 3 1/2; specific gravity, 5-5; its colour are various tints of white, yellow, blue, and peach; lustre pearly, in some cases nearly adamantine, and bearing a strong similarity to certain felspar, such as albite and several others that had been mentioned. It is found in most places where antimony glass is discovered. Beautiful varieties of aggregated crystals are met with at Pribram in Bohemia, Braunsdorf in Saxony, Wolfberg in the Harz, Malacza in Hungary, and Ain-el-belbou in the province of Constantine in Algeria; large quantities have lately been discovered in Borneo; this last species, although similar in appearance to stannous acid, is a dimorphous mineral, for it totally differs in its physical character. Senamite, so called from a French chemist, hardness from 3 to 3 1/2; specific gravity under 6; and crystallises in the cubic system: a splendid specimen of this was shown and described. Antimony ochre, or stibonite, occurs in earthy masses of a yellow, green, or brownish colour, generally found associated with other ores of the mineral. This is produced by inclusions from atmospheric influences of the elements. These inclusions are to a certain extent good indications of localities where the ores of a richer quality are to be found at depth, although in many instances they are derived a considerable distance from whence they are derived. Arsenical antimony, found occasionally splendid and sometimes dull, hardness 3-5; specific gravity 6-2; colour from white to a lead grey. It is easily distinguished from native antimony, as it tarnishes exactly in the same manner as native arsenic. Thomas has described a specimen which is isomorphous. Among the localities where it has been found may be mentioned, Balanches and Alemont, and Pribram in Bohemia.

UNITED MINES.—All operation at these mines are suspended.

MICHELL'S.—In the new cross-cut the ground is somewhat harder than before. We have resumed driving the shallow adit on the east lode, which yielded some good returns about three years ago; since then scarcely anything has been done on it. There is no change calling for remark in any of the pitches. Owing to the cold, unsettled weather which continues, we are prevented from commencing the usual summer operations. We hope, however, it will soon be warmer, when rather more satisfactory returns may be expected.

Estimated produce for April:—

	Ore.	Per cent.	Copper.
Raijas .....	42	7	2-94
Old Mine .....	85	5	4-25
United Mines .....	5	5	0-25
Michell's .....	20	5	1-00
Total .....	152	8-44	

The Copiapo Mining Company have received the Checo report for the half month ending April 15:—

The cross-cut driving north in the 20 is progressing favourably. The lode in the 20, driving east on north lode, is from 3 ft. to 3 1/2 ft. wide, and will produce 4 tons of ore per cent. ore per fm. In the winze below the 30, on north lode, the lode, I am glad to say is greatly improved, being now full 7 ft. wide, 3 1/2 to 4 ft. of which is ore of full 25 per cent. In the 30, on middle lode, the lode is 2 1/2 feet wide, producing about 3 1/2 tons of 16 per cent. ore per fm. In the 40, east of Price's shaft, the lode is 4 feet wide, but poor. In a cross-cut, driving north in the 40, the ground is hard for driving. In the winze below the 40, on south branch, the branch is 18 in. wide, 10 in. ore of 18 per cent. In the stopes in back of the 40, on south branch, the branch is improved, being now 18 in. wide, all ore of 20 per cent. In the 50, driving east of Harman's shaft, the lode is 6 ft. wide, spotted with ore throughout, very promising indeed. In the winze below the 50, west of Harman's shaft, the lode is 2 ft. wide, but poor. In the 60, east of Harman's shaft, the lode is 20 in. wide, but poor. In the 30, driving east of Harman's shaft, the lode is 20 in. wide, containing branches of ore throughout. In the winze below the 70, east of Harman's shaft, the lode is 1 1/2 foot wide, unproductive. In the stopes, in the old part of the mine, the lode is about 18 in. wide, all ore of 18 to 20 per cent. The pitches look well. Since my last report we have seen a new cross-cut to drive north in the 40, to intersect the new north lode. We have also set two pitches in the old part of the mine, on the south lode. Up to the present date we have driven the 30 and east, on the new north lode, 18 varas through a very flat lode of ore; and as you will see, the lode still continues very good. We have also sunk the winze below this level 18 varas, through a good course of ore; and as you will see, the lode is improving as we deepen this chifon.

The Iberian Mining Company report for May:—

No. 3 LEAD MINE.—The indications in the deep level east have not improved; the lode is about 1 foot wide, and composed of broken country, quartz, carbonate of iron, and occasionally a little blende. The driving continues easy, but requires timbering. We have dressed, during the month, 140 qntls. (about 6 1/2 tons) of very good ore. We have a few men employed in the No. 1 mine to keep up the sett.

The Castilian Mining Company report for May:—

The heading of the San Belday level has passed through the white clay, and is now in a bank of soft sand, containing a considerable quantity of crystallised iron pyrite, but at present without any traces of copper ore. The dip of the bank is about the same as the ore bank in the Borrera Mine, and in some respects it resembles the ground in that mine as we intersected it in the deep level. Should we find any copper in it, I think it will be worth while making a trial to find the back near surface, as we shall now be in possession of the point, more or less, where it ought to appear. All that part of the valley is covered with a considerable quantity of alluvial soil, which will make it a somewhat troublesome work. The furnace only worked a short time at the beginning of the month. When we get dressed up a good pile of work, we shall again commence operations. The produce of this month has been about 300 qntls. (about 13 tons) of dry and water dressed ore.

The Peninsular Mining Company monthly report for May:—

## Mining Correspondence.

## BRITISH MINES.

**ANGARRACK CONSOLS.**—J. Barratt, June 4: Since my last we have taken down the lode, and found it diminished to about 6 in. wide; it is composed of quartz, blende, and yellow copper ore. The ground is softer, and the lode has a better appearance than it had for several feet past. We have had hard ground, and the lode has been squeezed, or contracted, but never without good stones of ore. I think, from present appearances, after advancing a few feet, we shall again have a good productive lode.

**ARUNDELL COPPER MINES (Ashburton).**—F. Hawke, June 5: In the 46 fm. level we have cut into the lode 23 ft.; I think I can perceive the south wall masking its appearance; I should say another week will be sufficient to get through it. I continue to produce good stones of copper ore. No lode has been taken down in the 36; we are driving in the killas to the south part of it. The lode in the 25 is very kindly, producing good stones of manganite and yellow copper ore.

**BALLYMONEEN.**—W. Barkla, May 30: The cross-cuts in the 15 are making fair progress, but no material alteration to notice. Still much water coming out of the north driving, 15 fms. south; driven since last report 1 fm. 4 ft.—total, 10 fms. 4 ft. 3 in. The 15 north has been driven since last report 1 fm. 5 ft.—total, 10 fms. 1 ft. Our surface work is progressing satisfactorily; the engine-house is ready for the roof, but we shall complete the stock before we commence it, which will take about nine days. We have commenced to take the sulphur to Arklow, and bring the engine that was landed this week to the mine.

**BALLYVIRGIN.**—R. W. Smith, May 30: The east cross-cut is now driven about 13 fms. east of engine-shaft; the end is dry. The level driving in the back of the old stopes for an area to support the hanging ground, will yield 1 ton of lead and 5 cwt. of copper. We have in the cisterns at the 10, and shall commence dropping the new 7-in. lift next week, and I expect the pitwork and engine to go to work in a fortnight at latest. We shall not commence stowing till the latter end of June.

**BEDFORD UNITED.**—J. Phillips, June 4: The lodes in the 148, east and west of engine shaft, is from 2 to 3 ft. wide, composed of capel, spar, manganite, and stones of ore occasionally. The lode in the 130 east is not looking so well as we anticipated, it is at present 2 ft. wide, producing good stones of ore, but not enough to value. The lode in the 115 west is looking much the same as reported last week; Warne's stopes, in the back of this level, are worth 5 tons of good-quality ore per fm. The lode in Osborne's vein, sinking below the 115 east, is 3 ft. wide, composed of capel, fluor spar, manganite, and a little saving work for copper ore; the stopes in the back of this level will yield 4 tons of ore per fm. Paul's stopes in the bottom will yield 3½ tons of ore per fm. Jackson's stopes in the 103 will turn out 3 tons of ore per fm.; in this level, driving west, the lode is 2 ft. wide, producing good stones of ore. There is nothing new in any other part of the mine.

**BODCOLL.**—E. Evans, May 30: The prospect for lead in the 10 west is very much improved. Since last report the lode has opened very wide, and spotted with lead and copper, and considerably altered for the better; driven last week, 6 feet: total from shaft, 15 fms. 1 ft.

**BOG.**—Wm. Barratt, June 4: The shaftmen are getting on well in timbering the engine-shaft, and expect to get through it in a few fathoms. The pitches throughout the mine are just the same in appearance as they have been for some time past. I have received a letter from Rubson respecting the fine blends in the burrows, and requesting me to send a sample, which will be attended to at once. We have not been able to wash all the tributaries' ore, for want of labourers, in consequence of the chief part of them having small farms to attend to, which is always the case at this season of the year, and will be so until we get a sufficient quantity of work to keep them constantly on, which will be shortly after the water is drawn from the boat level.

**BOLLING WELL.**—J. Delbridge, June 30: In the 60 fm. level, east of engine-shaft, we have driven north of the engine lode 2 fms. In the cross-cut we have cut a lode 2 ft. wide, yielding some very good copper ore; the lode has a good appearance, and likely to open in good ground; at present we cannot say whether it is a part of the main or Holgate's lode. In the 50 east we have had some good copper ore in the past week; at present the lode is small, with a little ore. In the 40 east the lode is unproductive. In the 30 east the lode is 2 ft. wide, yielding 5 cwt. of lead and 1 ton of jack per fm. In the 30 west the lode is 3 ft. wide, worth 6 cwt. of lead and 1½ ton of jack per fm. In the vein (Austin's) the lode is 2 ft. wide, composed of lead, jack, and copper. We have holed the winze to the rise this day, and communicated with the 30 from Austin's; at this point the lode looks promising to yield a large quantity of blends ore. In the 20, west of Austin's, the lode is 9 in. wide, composed of lead and jack; in the 20, east of ditto, the lode is 6 in. wide, not to value; in the 20, east of King's, the lode is 20 in. wide, yielding stones of ore. In the 10, east of ditto, the lode is 2½ ft. wide, yielding 1½ ton of good ore per fm., with stones of lead. In the 20 west the lode is large and poor. At Austin's shaft, which is 7½ fms. below the 20, the ground is favourable for sinking. The new east shaft is sunk 30½ fms. below the surface; at this point we are cross-cutting towards the lode, which will be a trial, preparatory to sinking towards the 20, east of Austin's; we expect 3 fathoms will meet the lode at this level. In the winze, sinking below the shaft, in the east part of the mine, the lode is 1½ ft. wide, yielding a little lead, not to value. We purpose sampling a small parcel of lead (15 tons) about June 10. Other things throughout the mine are without change to notice.

**BRYNFORD HALL.**—W. Francis, May 27: I have the satisfaction to report an improvement in the 40 east, on Woodland's vein, having, since the meeting, intersected an oblique vein, which has brought in the commencement of another run of ore, yielding from ½ a ton to 12 cwt. to the fm. Since the temporary suspension from the late heavy rains, we have an abundance of work in clearing the workings over the 50, on both the Milw and Woodland's veins, so that no material alteration is likely to take place for a fortnight or more; during which the ore will be drawn from the tribute pitches, which could not be raised in time for our last sale.

**BRYNTAIL.**—The cross-cut through the lode is without alteration. The men during the north part of the lode are meeting with a quantity of barytes, mixed with spots of lead ore. There is no change in any other part of the mine to notice. There are two loads of lead ore sent to New Town, and another lode will be sent down the latter end of the week.—June 3.

**BULLER AND BASSET UNITED.**—G. Reynolds, May 29: We have this day set the engine-shaft to sink at 24 ft. per fm.; the lode is still large, being 4 ft. wide, with much manganite, blende, and some beautiful stones of yellow ore. We were formerly sinking this shaft with nine men, but we have this day put three extra ones, so that the shaft may be sunk with greater speed; the men are kept constantly at work from Monday morning to Saturday night.

**BULLER AND BERTHA.**—John Hanby, June 4: The lode has a little improved since my last, and I hope it will continue to do so. We have no cross-course yet, and the ground is much the same as it has been.

**BWLCH CONSOLS.**—E. Northey, May 27: The lode in the 50 is very much improved; the end is all saving-work, worth 7 cwt. per fm. The stope west of winze in the back of the 50 is not looking so well, but I think it will improve again shortly. All the rest of our operations are going on as usual.

May 30: The 50 is very much improved, worth 1 ton per fm. We sold, on the 20 ultimo, 30 tons of silver-lead ore to Messrs. Sims, Wiliyama, Nevill, and Co., at 17½ lbs. per ton. We shall sample again on June 19.

**CALSTOCK CONSOLS.**—W. B. Collier, R. Dunstan, May 30: The engine-shaft is sunk 3 fathoms under the adit level, the ground favourable for sinking, and the water in the shaft at present very moderate. The men are sinking 6 ft. per week. —Middle Lode: The lode in the eastern end is rather disordered at present, from the distance driven we anticipate being near a cross-course, which will account for its being disordered. We presume this cross-course to be the same as the one seen in Wheal Edward, where the lode becomes productive to the east of it.—Caunter Lode: The lode in the end is rather small, but carries a pretty regular footwall; from the distance this end is driven it must also be approaching the same cross-course referred to above, and from its bearing we expect soon to intersect one of the south lodes, where a great improvement is anticipated. In the tribute department there is nothing new.

**CAMBORNE CONSOLS.**—W. Roberts, June 2: In the 33 west, on the caunter, the lode is 1 foot wide, kindly, with stones of good ore. The 29 west appears to be improving; lode 1 ft. wide, composed of manganite and stones of ore. In the 10 west the lode continues 2 ft. wide, producing 1 ton of ore per fm.

**CARADON CONSOLS.**—W. Rich: There is no improvement in the new lode at the 35 east, and as the ground is very hard we have suspended operations for the present. The ground in the 31 cross-cut north continues very favourable for driving. We are forcing on this end with all possible speed. Some kindly stones of ore have been broken from the lode in the winze below the 27.

**CARADON WHEAL HOOPER.**—W. Brendon, June 3: Having opened on a lode in the north part of the set, corresponding with the South Caradon caunter lode, both in its character and underlay, we have commenced a shaft on its course; the lode is about 2 ft. wide, composed of gossan, friable spar, manganite, and copper ore; and, from its productiveness in South Caradon, we have no doubt of similar results at the same depth.—June 3.

**CARAVANNALL.**—W. Roberts, June 3: Setting Report.—The 118 to drive west by four men, at 31. 10s. per fm.; lode 1 ft. wide, composed of flookan, crystallized iron, and a small portion of black ore. The 106 west by four men, at 31. 15s. per fm.; lode 1½ ft. wide, chiefly flookan. The 96 west by four men, at 31. 15s.; lode 1½ ft. wide, kindly, with stones of good ore. The 86 west by four men, at 31. per fm.; lode nearly 3 feet wide, unproductive. The winze to sink under the 106 by four men, for tin; in Eade's rise, in back of this level, the lode is 7 ft. wide, worth 10½ per fm. for tin. In Trestrail's winze, sinking under the 50, west of Walter's cross-cut, the lode is large, carrying 4 ft. worth 10½ per fm. for tin.

**COLLACOMBE.**—S. Mitchell, June 2: During the last month, Morris's engine-shaft has been sunk below the 72 about 2 fms. The 72 west of Morris's engine-shaft has been driven about 4 fms. 3 ft., the lode is composed of soft quartz, prian, manganite, and 1 ton of rich ore per fm. The lode in the 72, east of Morris's shaft, has been cut through, and proves to be full 12 ft. wide, of a highly promising character, composed of congenial capel, quartz, manganite, and copper ore. The 62, west of western shaft, has been driven 3 fms. 1 ft., and the lode is improved, being worth about 2 tons of good ore per fm. The 62, east of Morris's engine-shaft, has been driven 8 fms., there is no alteration in the lode to notice. The 50, west of the western shaft, has been driven 3 fms. 5 in., the lode is full 5 ft. wide, composed of capel, quartz, blende, and increased quantities of copper ore. The 40, west of the western shaft, has been driven 3 fms. 1 ft. 6 in., the lode is full 6 ft. wide, composed of quartz, manganite, blende, and about 1 ton of ore per fm. Other operations progress well.

**COLLEGIA MINES.**—A. Brathwaite, B. Tucker: We have dressed and sold 7 tons of lead, and have 7 tons more in course of dressing.

**DEVON AND CORNWALL UNITED.**—T. Neill, June 2: The lode in Bastard's end is producing stones of ore, but nothing to value. The lode in the slope west of rise is worth 10 stones of ore per fm. The lode in the Midway level above is much improved, worth 5 tons of good ore per fm. This proves a continuation of ore ground from one level to the other.—Middle Level: The lode in the end is a little improved, producing some good stones of ore. The stope under the new shaft is worth 3 tons of ore per fm. The lode in the pitch in No. 2 winze is worth 3 tons per fm.

**DEVON BUREA BURRA.**—Capt. J. Lord, June 4: The men are progressing satisfactorily in sinking the shaft, and I hope they will do their bargain by our next setting. We find good spots of grey ore on the north part of the lode. We are making fair progress in driving east; this lode is composed of strong capel, quartz, prian, and rich stones of grey ore; it is still of a very promising character, and a quantity of water is issuing from it. The tributaries have not taken down any of their lodes during the past week.

**DEVON WHEAL BULLER.**—W. Neill, June 4: There is no material alteration in any part of the mine since my report of last week, with the exception of the eastern slope in the back of the 32 west, which is much improved. We are now busily engaged fixing the plunger-lift in the 32, and expect to complete it by Saturday next, which is our pay and setting day, both for tribute and tutwork.

**DOLWEN.**—F. Evans, May 30: We have, in the past week, sunk the new shaft on the lode 3 ft.; the lode looks exceedingly promising, and there is no doubt of its making lead ore in depth. I do most certainly advise the sinking of this shaft. The lode driving on to the adit is looking better than I have seen it for some time; there is a good deal of water coming from it; it is composed chiefly of lead-bearing quartz, and no doubt there is lead under this quartz and gossan; driven last week, 4 feet 9 in.: total from month of level, 49½ fms.

**EAST ALFRED CONSOLS.**—H. Skewes, June 4: The engine-shaft is sunk 3 fms. below the adit, the engine-house is up level with the bob end. The western end is below 8½ per fm. Other parts of the mine are much the same as last reported on.

**EAST CARN BREA.**—T. Glanville, June 3: In the engine-shaft, sinking under the 10, the lode is about 5 ft. wide, producing saving work for tin. In the western part of the mine we have cleared a shaft to the adit level, and have been able to go east on the course of the lode 15 fms. only. We are now clearing the level.

**EAST FOWEY CONSOLS.**—J. Dale: The cross-cut in the 30 is now extended about 10 fms., towards the lodes; we expect to cut one in the course of a fortnight. The lode in the wood is underlaying full 7 feet in a fathom. We have many fathoms to drive the cross-cut before the lode can be cut; the men are still employed in sinking on its course; its size is about 4 feet.

**EAST FRONGOCHE.**—T. Phillips, June 3: In the 30 east the lode is still hard, and a great deal of water coming from it; we have not cut through it, in consequence of not having at all times (during the past fortnight) a sufficient supply of water for the wheel. Our operations in this level have been rather limited; driven during the past fortnight 4 ft. The ground in the 20 cross-cut north has considerably changed; we have cut through several small branches, in which we found manganite and copper, and to-day we discovered a fine wall, with spots of lead on it, and underlying about the same as the main lode, about 20 in. in a fathom; this level has been extended 1 fm. 3 in. since my last. We have about four hours' work yet to do to put the small lift in working order. The fan and pipes are on the mine, and will be fixed in the course of a few days. Wheel, and everything attached, in good working order.

**EAST KITT HILL.**—R. Williams, June 4: The new engine-house at this mine is being put on to day. I hope the engineers will proceed at once with their work, so that no time may be lost in developing this valuable mine.

**EAST ROSEWARNE.**—W. C. Vivian, May 30: We shall be ready to commence fixing the plunger in the 22 fm. level, in the course of a week; this, when accomplished, will have the effect of expediting the sinking of the engine-shaft, and all the other operations in the deeper parts of the mine, and will at the same time save much cost in fuel, leather, and labour; our water-course will then not be more than four strokes per minute. In the 22 fm. level, east of the engine-shaft, the lode is 15 in. wide, producing a sufficient copper ore to pay for saving, and latterly has been improving in quality. In the 22 fm. level, west of the first western whim-shaft, we find that the principal part of the lode is standing to the south of the branch on which we have been latterly driving, and we are now engaged in cutting into it; I have no doubt that we shall soon have ore again in this end, as we are still under the old workings. The rise in the back of the 22 fm. level, west of the first western whim-shaft, is now up 2 fms., where the lode is producing 1 ton of copper ore per fm. I think it probable that we shall communicate this rise with the old workings above in the course of the ensuing month, when we shall be enabled to let some good tribute ground. In the 12 fm. level, east of cross-cut, south from the second western whim-shaft, we are evidently very near the lode, as there is more water than usual coming from the country. In the 12 fm. level, north from the north lode, now in about 15 fms., we are in a very favourable channel of killas rock, which is greatly stained with greens. It is impossible to say exactly how far we may have to drive further to intersect the lode (which is said to be Duffield main lode), but we think about 12 or 14 fms. In the 12 fm. level, east of cross-cut, on the north lode, but the lode is improving in appearance, and producing good stones of copper ore. In the 6 fm. level, east of cross-cut, on the north lode, there is a good branch of copper ore, 6 in. wide. In the 22 fm. level cross-cut north from the north lode, now in about 15 fms., we are in a very favourable channel of killas rock, which is greatly stained with greens. It is impossible to say exactly how far we may have to drive further to intersect the lode (which is said to be Duffield main lode), but we think about 12 or 14 fms. In the 12 fm. level, east of cross-cut, on the north lode, but the lode is improving in appearance, and producing good stones of copper ore. In the 6 fm. level, east of cross-cut, on the north lode, there is a good branch of copper ore, 6 in. wide. In the 22 fm. level cross-cut north from the north lode, now in about 15 fms., we are in a very favourable channel of killas rock, which is greatly stained with greens. 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so, but not enough to value. The air being foul, we have suspended this end for the present, and have put the men to rise, to hole to the winds under the 72 fm. level, which, when completed, will thoroughly ventilate this, the 82 fm. level, and greatly facilitate its future driving. In the 52 fathom level were the flat lodes is 5½ ft. wide, composed of quartz, peat, mudi, and yellow ochre, yielding about 2 tons of the latter per fm. In the 32 fm. level west the lode is 2 ft. wide, producing a little ore—a sandy lode; in the 32 fm. level east the lode is 2 ft. wide, composed of gossan and spar, with a mixture of black and grey ore. No alteration in any other part.

**NORTH WHEAL ROBERT.**—W. Godden, May 28: At the eastern part of the mine, there is no alteration to notice since last reported on. In the 42 end, west of trial shaft, the lode is greatly improved, now about 5 ft. wide, the leading part worth 2 tons of good ore per fm. In the cross-cut south we are driving on a branch which we intersected last month, where we have good spots of ore. We shall sample tomorrow about the quantity of last month.

—W. Godden, June 4: I beg to inform you that the 62 fm. end is much the same as last reported on. We have cut through the south lode in the 52 end west, and commenced driving on it where the lode is 3 feet wide, good saving work. The 43 end is still improving. The 30 end was much the same as for some time past. The stops throughout the mine are yielding fair quantities of ore. At the western mine, the 42 cross-cut south is suspended, and we have reduced the hands in three of the stops at the eastern mine. In the 42 end, west of the trial shaft, the lode is 5 feet wide, worth about 2 tons per fm. We have four men stopping in the lode of the same level, west of the winze; the lode is 3 feet wide, worth 2 tons of good ore per fm.

**NORTH WHEY AND JULIA.**—J. Hodge, June 4: The ground at the shaft is very similar to that before stated, easy for sinking, and very congenial for the production of silver-lead ore. In consequence of the recent accident, we purpose sinking a week or two longer, in order to make up the depth of 15 fathoms, as stated in my report for meeting, another cut pit, &c.

**OLD TOLGUS UNITED.**—G. Reynolds, May 30: Today being our setting-day, I have to inform you, we have set the engine-shaft to sink at 10½ per fm.; the lode is the shaft is much the same as it has been for some time past, the men during the month sunk 2 fms. 2 ft. The lode going west in the 18 is composed of mudi and spar, as well as some good stones of ore, at 21. 6d. per fm., by six men. The lode going east in the 16 has greatly improved since the last report, it is 4 feet wide, and has a very promising appearance, composed of spar, white iron, copper ore, and blende. This level at present drains the bottoms of water, and bids fair to be a productive piece of ground, being not as far east as the bottoms by 8 fms.; from the appearance of the lodes in this level there is every indication of its being a productive lode in depth; the end was set to-day to drive at 41. 18d., by four men. The adit going west was set to-day at 21. 18d.; the lode in this end is the same as when last reported. We are driving a cross-cut south from a shaft, due south of the engine-shaft, to cut the south lode; this cross-cut was set to-day for 22. per fm., by two men. The men are continuing to work with spirit and energy.

**PENDRAN-DREAS UNITED.**—J. Carpenter, T. Delbridge, J. Thomas, May 30: The 90, west from engine-shaft, on Martin's lode, the lode is from 3 to 4 feet wide, worth 10d. per fm. The 90, east from engine-shaft, on same lode, there is good indication for an improvement. We have within the last two days discovered a little granite, and good stones of tin in the present end. In the past week we have set a wing to men to sink in the bottom of the 90, new deposit, about 4 fathoms east of the end of the 90, worth 40d. per fm. The 80, east from engine-shaft, on Martin's lode poor. The 60, west from engine-shaft, on Martin's lode, the lode is about 1½ ft. wide, producing good stones of tin. Our tribute stops are yielding a fair quantity of good work for tin.

**PENBROK AND EAST CRINNIS.**—J. Dale, G. T. Trowen, June 2: In the 162 cross-cut south the ground is rather improved during the past week. In the 163 north the men are making fair progress. In the 112, east from East Crinnis shaft, the lode still continues to look very promising. The lode in bottom of this level will produce from 1 to 1½ ton of ore per fm. In the 100, west of Smith's shaft, and stops in back of same level, no lode taken down for the past week. The 100 east is letting out a quantity of water, which is evidently coming from the bottom of the 90, as the water is decreasing in that level. In the 70 east no lode taken down since last reported. All other parts of the mine are much the same as for some time past.

**PENDEEN CONSOLS.**—W. Eddy, May 30: The lode, and the ground in the engine-shaft, is much the same as last reported. In the 70, going south, no lode taken down for the week; ground good for driving. In the 70 north the lode is about 2 ft. wide, and very ore; this end is very promising, ground good for driving. Here I am expecting to see something good daily, when I shall write you at once.

**PENHALDARVA.**—J. Pope, May 30: In the adit level south the lode is large, composed of lead, jack, and mudi, with a very promising appearance for improvement, prior for driving 32s. 6d. per fm. In the adit level north the lode is producing good stones of lead, and in a beautiful blue killas; here I expect an improvement shortly, prior 32s. 6d. per fm. The engine-shaft is driven from surface about 9½ fms., which will take a week or ten days more to make it complete to adit; when this is done we shall commence sinking below at once. The engine-house is now about 12 ft. high, and will take from three to four weeks more to complete. We have set the engine to bring homes, which will be done as soon as the work is ready to take it. We are getting on with the dressing of lead, and shall have 10 to 12 tons for sale shortly.

**PONTERWYD.**—J. Hughes, June 1: The level at the 23 has been driven 15 fms. north of west, where the Clara lode was intersected, and we have driven on the course of the same westward 12 fms. The lode is at this end from 1 to 5 feet wide, underlying south about 2 feet in the fathom. It is composed of fine clay-slate, carbonate of lime, spar, blende, and small spots of lead, for the whole length opened on. I have put two men in the rise in the eastern adit, and expect they will cut through to the shaft above before the end of this month; and when this part of the mine is well ventilated, we will commence stopping, and I hope to have a lot of ore ready by the time the crusher is erected, the castings for which will be ready this week.

**SILVER BROOK.**—W. Hooking, June 4: The sinking of the engine-shaft is progressing satisfactorily, in a congenial stratum of ground, it is now down 6 feet below the 71, where the lode is 3 feet wide, of a very promising appearance, consisting of mudi, capel, flookan, and spar, with lead and zinc ore. The lode in the end in the 71, north of engine-shaft, is 3 ft. wide, worth 7s. per fm. In the 71 south the lode continues without important alteration, containing spar, flookan, &c., and producing in places good stones of ore. The winze in course of sinking below the 55 south is now down 5 fm. 3 ft., where the lode is 4½ ft. wide, yielding a small proportion of ore. The cross-cut in the 22 north is driven 9 fms., and still in very favourable ground. The tribute pitch in the back of the 71 north is looking well, producing 3 tons of ore per fm. The pitches in the upper levels are falling off in value.

**SITHNEY WHEAL BULLER.**—Metal lode in the 80, west of cross-cut, has been driven 3½ ft. in the past week; the character of the lode at this point is much the same as last reported, having a favourable appearance, but not producing tin to value. The cross-cut south from engine-shaft in this level, towards Schneider's lode, has been driven 2½ ft., the ground hard; therefore, the progress is slow. Schneider's lode, in the 50 east, is looking more favourable than even when last reported; and it is fully expected that a good lode will shortly be met with at this point. Other parts of the mine are much as usual. A more detailed account, containing the operations of the past month, will be given next week.

**SORTRIDGE CONSOLS.**—J. Richards, June 4: No change since last week.

**SOUTH BEDFORD CONSOLS.**—J. Phillips, June 4: The lode in the 62, east of Red whin-shaft, is 3 ft. wide, producing saving work; in this level west the lode is 3 ft. wide, producing from 1 to 2 tons of ore per fm. The stops in the back of this level are producing good stones of ore. The lode in the 49, east of Gullett's shaft, is 3 ft. wide, producing saving work; the stops in the back of the 38, west of this shaft, are worth 2 tons of ore per fm.

**SOUTH CARN BREA.**—T. Glanville, June 2: There is no alteration to report at either of the points of operation in this mine, excepting that in the deep adit cross-cut south, we think we have cut the capels of the lode. A few days will enable us to decide this point.

**SOUTH CRENVER.**—J. Delbridge, E. Chegwin, June 1: We have sampled 109 tons of copper ore. In the 105 west the lode is 1 ft. wide, stones of ore, not value. In the 94 east the lode is 1½ ft. wide, stones of ore. In the 84 east the lode is 1½ ft. wide, stones of ore; this lode appears to be improving as we drive towards the elvan. In the 74 the lode is 1½ ft. wide, yielding 1 ton of ore per fm. The 64 lode 1 ton per fm. The 54 west stones of ore. The 44 west 1 ton of ore per fm. The 34 west stones of ore. The 24 west 2½ tons per fm. The 24 rise west 2½ tons per fm. The 64 east 1 ton per fm. Our tribute pitches throughout the mine bid fair to yield their usual quantity of copper ore. Our machinery and pitwork is in a good state of working.

**SOUTH DOLCOATH AND CARNARTHEN CONSOLS.**—W. Roberts, June 2: In the 70 west the lode is 2 ft. wide, ground favourable for driving. The rise in back of the 50 is holes to the 40. In the 40 west the lode is 3 feet wide, very promising, with occasional stones of ore.

**SOUTH GORLAND.**—James W. Gilbert, May 30: The lode in the deep adit level driving west is from 2 to 3 feet wide, saving work for tin, and is set to drive by six men, at 13s. per fm. for the month. I have found a large firm shaft at the centre of Messer's bottoms, which is reported to be down 30 to 40 fms. from surface, which I consider will be of great benefit to our western ground. I estimate our copper ore at about 1000t. in the stone 60.

**ST. AUSTELL CONSOLS.**—R. H. Williams, May 30: In the 45, at Dowson's shaft, the end south is not yet clear of the hard run; it is showing an improvement as we go south. The 35, in the cross-cut south, we are in the elvan course about 6 fms.; in about three or four weeks I hope we shall cut through it. The end east in stops lode is looking kindly for tin. The lode west is large, and of a promising character. There is nothing else of importance to report this week.

**SWANPOOL.**—J. Kitto, June 3: The lode in the 20, west of engine-shaft, is 1½ ft. wide, composed principally of spar and mudi, and has a very promising appearance. The lode in the 40 west is 3 feet wide, and presents much the same appearance as the 20. The south branch in the 50, east of engine-shaft, is 1 foot wide, composed of spar, mudi, and lead—the latter about 7 fms. per fm. The ground in the 50 cross-cut north is a little more favourable for driving. The 60 cross-cut south is much the same as last reported. The lode in the 40 east is of a very promising character, the ground is very favourable, and in every respect quite congenial for lead. I think there is every reason to expect an improvement in this level very shortly. In the past week we have been raising some of the poor ore from the different parts of the mine, which is turning out equal to expectation, and have now from 80 to 100 tons at surface; for with I see, there will be no difficulty in raising 100 tons per week. We have a cargo ready for Mr. Benson, which we shall send him as soon as we can get a vessel, which we hope to do in a day or two. We intend to sample on Saturday next about 20 tons of lead ore.

**TAMAR SILVER LEAD.**—T. Foot, June 2: The lode in the 215 south is 2 ft. wide, and will produce 9 cwt.s. of lead ore per fathom. There are 3 stops in the back of this level—No. 1, producing 9 cwt.s., and No. 2, 8 cwt.s. of ore per fathom. The lode in the 205 south is 2½ ft. wide, yielding 13 cwt.s. of ore per fathom. The lode in the end driving north at this level is 4 feet wide, worth 7 cwt.s. of ore per fm. The stops in the back of this level, three in number, are producing respectively 8, 7, and 5 cwt.s. of ore per fathom. The lode in the 190 south, is 1 foot wide, producing 30 cwt.s. of ore per fathom. There are three stops in the back of this level producing as follows:—No. 1, 6 cwt.s.; No. 2, 5 cwt.s.; and No. 3, 9 cwt.s. of ore per fathom. The stops in the back of the 160 and 35 fathoms level are without any alteration since last reported on.

**TAVY CONSOLS.**—R. Williams, June 3: The lode in the 80 east is about 14 inches wide, producing some spots of copper and mudi, but is much mixed with spar; this end is now about 12 fms. east of the shaft. The stops in the bottom of the 56 east is not quite so good as at the date of last report, worth at present about 3½ tons of ore per fm. The stops in the back of the 56 west is worth about 2 tons of ore per fm., and likely to improve. The 36 is driving east by four men, the lode is large, and producing

a little ore so far taken down; the remainder will be taken down in the course of the present week, when its value will be reported. The stops in back of the 36 west is not so good as last reported; on the north part, which produced the ore, some of the lode, however, is still standing, which will be taken down in a few days; although I cannot say what it will produce, I think it will be found productive.

**TINCROFT.**—W. Tague, J. Andrews, J. Cook, June 2: North Tincroft: In the 154, driving west of Tyne's engine-shaft, the lode at present is unproductive. In the 154, driving west of Tyne's shaft, the lode is 3 feet wide, and worth for tin 15s. per fm. In the 142, driving west of shaft, the lode at present is poor. In the 142, driving east of shaft, the lode is 3 feet wide, and worth for tin and copper 10s. per fm. In the 90, driving east of Willoughby's shaft, the lode is 3 feet wide, and worth for tin and copper 10s. per fm.—Highburrow Lode: In Martin's east shaft, sinking under the 162, the lode is 6 feet wide, and worth for tin 50s. per fathom. In the 162, driving east of Martin's east shaft, the lode is 2 ft. wide, and worth for tin 12s. per fm. In the 162, driving west of cross-cut, the lode is 2½ feet wide, and worth for tin 12s. per fm. The stops and pitches are much the same as last reported.

**TOLVADDEN.**—G. Bennett, F. Gundry, June 2: On Saturday last we took down the lode in the sump, the 5 ft. of ground turned out 11 tons of best ore and 2 tons of gossan ore. The eastern end is now worth from 20s. to 30s. per fm.—a splendid lode, about 25 fms. from surface, and what we term the adit level. The sump is now 4 fms. deeper than this level, the lode at present worth 120s. per fm., and improving in quantity and quality every fathom we sink. The engine is working well, and of sufficient power to keep the water out of the mine, from present appearance, at least 20 fms. deeper. But as soon as we drain our eastern ground to enable us to sink a winze, which we expect shortly to accomplish, we shall be in a position to increase our returns considerably. We expect our next sampling will be not less than 100 or 110 tons, worth from 8s. to 10s. per ton. Our monthly cost about 300s. per month.

**TRELOWETH.**—T. Richards, May 30: The parcel of copper ores, computed at 22 tons, is expected to fetch exceeding 14s. per ton. The 50 east will turn out 20s. worth of copper ore per fm.; the 50 west will yield 15s. per fm. The stops east of Woodfall's, in back of the 60, are improving. The 60 west is yielding stones of good ore, being within 9 fms. of the cross-course, from our calculation; it is likely that we shall have a good lode of ore, from present appearance, before the cross-course is intersected. The 70 is now under Woodfall's shaft, and is producing from the end good lump of mudi, or pyrites, with spots of ore. The pitches in the bottom of the 90 are looking as usual for quantity and quality. We purpose sampling the usual time, and calculate upon an increased amount of sale. About the tin smelting house a large promising lode for copper is said to exist, but having not adit into it, and a deep clay soil, it has not been seen by us; but we purpose doing so at once, the expense of which is trifling, the result may be great.

**TREVONE CONSOLS.**—T. M. Penallw, W. Bedder, June 3: A great improvement has taken place in the 25 east, the leader being 8 in. wide, good work for lead. All other parts of the mine look well as before. We have now a good pile of lead, and a good one of copper ore ready for sampling.

**TREWANE UNITED.**—R. Reynolds, June 2: Since the lode has been cut in the 30 we have driven about 3 fms. on its course, and find it still holding good, and I think I may say showing every appearance of a further improvement. The Marlborough adit is being driven by two men at 50s. per fm.; and, judging from the present indications, we are not far from the lode. I hope we shall shortly be in a position to make good returns of silver-lead ore, of rich quality.

**TREWEATHA.**—T. Richards, W. Howe, June 3: In the 70 there is no change to notice since last report. In the 60, north from the engine-shaft, the lode is worth 4s. per fm. The 50 north is worth 5s. per fm. The 40 north is producing a little saving work. The stops are producing much as usual. We have resumed sinking the engine-shaft, to cut the south lode; this cross-cut was set to-day for 22. per fm.

**UNITED MINES (Tavistock).**—J. M. Champion, June 3: I have to-day ordered the water to be drawn out from the bottom of the shaft, in order to stop down the lode, which is now standing about 2 fms. from the bottom, that we may ascertain the quality and size, which can be accomplished for a small expense. The lode in the 28, east from the shaft, is 10 in. wide, worth from 4s. to 5s. per fm. for tin; this level is driven 18 fms. 5 feet from the shaft, and so near as I can judge from the level above by measuring, and the bearing of the cross-course, we shall have about 4 fms. more to drive to intersect the same in the 28. The lode west from the shaft is much the same as last reported. We are still driving the cross-cut in the 28, to intersect the south lode; the lode is somewhat further south than I anticipated, but there are no symptoms of our being near the lode: the ground is easier for driving, and also getting wetter. The pitch in the back of the 28, west from the engine-shaft, is worth 3s. 10s. per fm. The pitch in the back of the 28, east from the shaft, is worth 5s. per fm. The pitch in the back of the 18, west from the engine-shaft, is worth much the same as last reported. There is no alteration in any other part of the mine since I last wrote.

**VALE OF TOWY.**—S. Thomas, S. Harper, T. Harvey, June 2: Clay's engine-shaft, sinking under the 50, is the same as last reported; sinking about 1½ foot per week. In the 50 north the lode is 2½ ft. wide, producing 4 cwt.s. of lead per fm. In the 40, south of Field's shaft, the lode is 1½ ft. wide, mixed with lead, but not a sufficient quantity to value. In the winze in bottom of the 40, north of Clay's engine-shaft, the lode is 3 ft. wide, composed of barytes. In the rise, in back of said level, the lode is 2½ ft. wide, mixed with small quantity of lead. Bonville's shaft, sinking under the 40, ground hard. In the 40, north of said shaft, the lode is 3 ft. wide, with a small quantity of lead. In the winze in bottom of the 30, north of the lode is 2½ ft. wide, composed principally of barytes and gossan. We sampled, on Saturday, computed weight, 46 tons of lead.

**VIRTUOUS LADY AND WHEAL BEDFORD.**—J. Metherell, June 4: The 50 ft. shaft is stripped down and made 10 ft. long and 5 ft. wide, deep enough under the river to enable us to drive, which we shall do after forking the water to the bottom of the old shaft. The 50 west from engine-shaft, on Gwendoline's adit, is 3 ft. wide, composed of spar, flookan, and spar, and with a kindy appearance. The 50 east from engine-shaft, on Gwendoline's adit, is 3 ft. wide, unproductive. The 50 west from engine-shaft, on Gwendoline's adit, is 2 ft. wide, producing some very good work for tin; at present the lode is 2 ft. wide, producing some very good work for tin; I hope to be able to give you more particulars about this next week. In our 30 end, east of Francis's shaft, on Gwendoline's adit, since we discovered the tin end, we have driven 7 fms., lode varying from 1½ to 2 feet wide, and tinnied throughout. To-day, I have placed the men to rise in the back of this level, to prove notice has taken place in the 22 during the past week. We have a branch 6 in. wide in the bottom of the end, composed of quartz, with good stones of grey, yellow, and malleable ore: we are carrying about 4 ft. of the lode, which is looking very kindly. The whin-shaft is still sinking in a strong killas, intersecting branches, all of which are carrying spots of ore.

**WHEAL GILMAR.**—J. Reed, June 3: Field shaft is being sunk by eight men, now down about 6 fms. below the 30; the ground in the shaft is softer, and of a more promising character. We have not as yet discovered the copper ore lode in the shaft, but expect to shortly. The copper lode in the 30, east from Field shaft, is 1½ foot wide, composed of mudi, quartz, with spots of copper ore, but not worth saving. In other parts of the mine there is no change worth noticing.

**WHEAL GREENVILLE.**—G. R. Odgers, May 30: In handing you my report on this mine, I beg to say, the Newton engine-shaft is down to the 54, and we shall commence next week to divide and case the shaft, and then throw the kibble to bottom. The lode on the north wall is from 12 to 14 in. wide, composed of quartz; that on the south side is going east, and in depth will unite with the north one; it is from 12 to 18 in. wide, 6 in. of which is producing good black and grey copper ore in a friable quartz matrix with gossan, &c., and in fact in going west it is showing a very promising appearance indeed. There is a piece of ground standing against it in the shaft, which we shall strip down, 9 ft. high and 2 ft. thick, and then open on it, and which I

WHEAL UNION.—T. Glazier, June 2: We are now clearing up the shaft below the 30, and hope to see the bottom in a few days. In the 20, driving west of engine-shaft, the lode is about 2½ ft. wide, composed of soft spar, and a large stream of water is flowing from it.

WHEAL UNION.—J. Vivian, May 30: We have forked the water to the 30, and again resumed driving the same level east, where the lode is 2½ ft. wide, kindly in appearance, and worth from 8d. to 10d. per fm. for copper ore; in the same level west the lode in the rise is 2 ft. wide, and worth about 8d. per fm. for copper. In the 19 east the lode is 2 ft. wide, composed of spar, gossan, and a little copper ore. In the 10 east the lode is 2 ft. wide, rather disordered at present. In the adit east the lode is 2 ft. wide, composed principally of gossan. In the adit east, on the south lode, the lode is 1½ ft. wide, composed principally of spar and gossan. The new engine-shaft is down about 9 fathoms under the adit level.

WHEAL VENTON.—T. Richards, June 3: The ground in the 60 cross-cut is now much improved, being altogether of a better description; softer in its nature and general character; the price for driving is reduced from 11d. to 7d. per fm., and should the ground continue as at present, we shall progress at the rate of from 5 to 6 fathoms per month.

WHEAL ZION.—J. T. Phillips, June 3: In the winze sinking below the 50 we are making fair progress. In the 65 east the ground has been rather hard, the lode is standing to the south, we expect to get under the winze in order to commence rising very shortly. The 50 cross-cut is without change. The adit level in the globe is going forward satisfactorily.

WILLOW BANK.—J. Sanders, June 1: Our pay and setting was on Saturday, when the following bargains were set:—The eastern engine-shaft, to sink by nine men, 3 fms. stent, at 18d. per fm. The 17, to drive west from eastern engine-shaft, by six men, 2 fathoms stent, at 7d. per fm. The boundary shaft, to sink by nine men, 1 fm. stent, at 2d. The adit level, to drive east, by six men, for the month, at 32. 10s. per fathom. The eastern engine-shaft is down 10 fms. below the 17, where the lode is from 2 to 3 feet wide, and poor at present. The lode in the 17 east is 4 ft. wide, with spots of lead ore in it, but not sufficient to set a value on. The 17 west is much the same as last reported. The boundary shaft is down 13½ fathoms from surface, and within 6 feet to where the back of the adit will come in. The adit is driven 43 fms., and there is about 32 fms. more to be driven to communicate with the shaft. The water is very heavy, both at the boundary and eastern shafts, so much so, that our top water is not sufficient in dry weather for the engine to keep both shafts in fork. If the boundary shaft could be suspended until the adit is driven up to it, it will be a very great advantage towards carrying on operations in the other part of the mine.

WOOD MINE.—S. Cook, June 3: On Saturday last, being our setting-day, the deep adit end was set to drive north by six men, 2 fms. stent, at 32. 10s. per fm., rolling, filling, and landing, all included in the above price; we shall drive about 2 fathoms more, and then take down the lode. The ground by the side of the lode is strongly impregnated with jack, lead, and muriatic, and the water highly mineralised.

PENCORSE CONSOLS.—J. Champion, R. Tippet, June 2: The lode in the 6 driving west from Marshall's shaft is improved, lode 1 ft. wide, will turn out 1 ton of jack per fm., and a little lead ore. In the 6 east and west from Marshall's cross-cut the lode is poor at present, and the men are engaged stopping the backs behind those ends; the slopes will turn out 2 tons per fm. The lodes in the 45 east and west from Retallack's shaft is without much alteration since last report, producing a little saving work. The 45 east from the east shaft has been driven but little since last reported, and is without alteration: the men are engaged cutting a plat. To day we have shipped a cargo of 112 tons of jack, and shall send another cargo to the port without delay. The engine works well, and is consuming 24 cwt. of coal in 24 hours. All other operations on surface are going on well.

[WHEAL TRELLAWY.—In Capt. Prince's report, published in last week's Journal, in speaking of the 120 fm. level, north of Chippindale's shaft, the 11. per fm. should have been 8d. per fm.]

#### THE TIN TRADE—ITS STATE AND PROSPECTS.

Messrs. Dadelzen, in their monthly report, notice the continued cessation of purchases for the Tin Plate manufacturers, very small deliveries, and a considerable decline in price. At present it is almost impossible to find buyers of Foreign Tin, and should any of the late arrivals be pressed for sale, there may be a further decline.

A steady demand continues, however, for English Tin, both common and refined. English Tin was reduced on May 10—common 3d., and refined 4d.; and again on Monday 5, per ton. The transactions reported in Foreign are very trifling, not more than 300 or 400 slabs Straits, at from 140s. to 158s.; but there are now sellers under these prices, and we much doubt if 135s. would be refused for a good round lot. Of Banca, the only sales reported are 100 slabs at 144s., and a like quantity at 143s. It is generally agreed that the tin-plate manufacturers, with few exceptions, are almost without any stock of Foreign tin, and that their stocks of English are at most a month's consumption. The recent arrivals of tin ore, and "black sand" from Australia have caused some little perplexity to those interested in the article, as it is said that very large quantities abound on the banks of the Murray River, and if means of transit can be found, we may have large supplies from there. The general run of the parcels arrived have contained about 96 per cent. of fine tin, and the ore have sold at about 7d. per ton. In Holland, as well as here, very little has been done—only a few small lots at about 85s. at which there are now sellers. The present stock of tin in Holland is 8,255 slabs, and the quantity arrived towards the next sale 12,586 slabs, against 144,678 in 1856; the delivery last month was 2953 slabs, against 4018 in 1856.

The import of tin into London during the past month has been—Straits, per Esdale, 765 slabs; per Forbess, 3000; per Stirling, 1026; Billiton, from the Cape, 300; Banca, from Holland, 900;—5302 slabs.

The export of tin during April and the first four months was—

Month ending April 30,		Four months ending April 30,	
1855.	1856.	1855.	1856.
Foreign.....	ewts. 631	349	88
.....	.....	1499	1,103
.....	3322	2013	3885
.....	.....	10,303	12,000

The export from Singapore to Great Britain from Mar. 15 to April 16 was 701 pecks—42 tons; from Penang, 2182 pecks—130 tons. The quantity now on the way from Singapore and Penang, exclusive of the above, is only 16 tons. Price in Singapore and Penang, 53½ to 54.

The Dutch tin ass is just announced for July 16, to take place at Amsterdam, and to consist of 180,705 slabs, in lots of 500 slabs each—the Society reserving the right of adding 10,000 slabs, if they arrive in time.

Tin-plates have been dull, sellers trying to sustain prices in anticipation of the American demand, and buyers wanting a reduction on account of the decline in the value of tin.—Declar'd value of tin-plates exported during April, and the first four months, was—

Month ending April 30,		Four months ending April 30,	
1855.	1856.	1855.	1856.
Foreign.....	ewts. 631	349	88
.....	3322	2013	3885

£26,934 ..... £143,326 ..... £134,818 ..... £295,556 ..... £427,302 ..... £503,061

LOD'S DUES.—In following up the subject of lords' dues, mentioned in our last Journal, we are glad to be able to state that the lords of the manor of Tyne Head, in Alston Moor, Cumberland, have granted reduced dues to the Tees Side, Tyne Head, and other mining companies. Up to a very recent period, the dues on all mines in this district were 1-7th. The Tees Side Mine is now 1-10th above level and 1-15th below. The Tyne Head Mine is 1-12th. It is true these are but partial reductions, but it is the fault of adventurers holding mines under his Grace the Duke of Cleveland (who exacts 1-6th dues) and the Commissioners of Greenwich Hospital if they do not speedily, by laying proper arguments before them, obtain reductions also. Lessors must show the lessors that the interest of both will be served by such reduction.

THE ANGLO-ROMAN GAS COMPANY was established in 1852, and its working operations have given unmixed satisfaction. Rome was first lighted with gas on Jan. 1, 1854; the works are erected upon the side of the Circus Maximus; they are constructed of a capacity to furnish from 170,000 to 200,000 cubic feet of gas per 24 hours, with two gasholders of 65,000 cubic feet each, and are situated within 200 yds. of the Tiber. All the leading streets of Rome are lighted, and the company are extending their pipes to the streets adjacent to the principal mains. The courts of the Vatican are brilliantly illuminated, and the grand square of St. Peter's, the Quirinal, the palaces of the nobility, the chief hotels, and other public establishments are also lighted with gas. The Eternal City now presents, thanks to the genius of Murdoch, Winsor, and others, a very different night picture to that when the dim light from a few ill-arranged oil lamps rendered "darkness still more visible." The social and moral effects of this delightful change are spoken of and felt by all classes, and Rome is now looked upon by the advocates of progress, not as one of the "dark places of the earth" but as having made at length one effectual step in the march of civilisation. The company obtains some of the coal used in the manufacture of gas from Bamboli, in Tuscany, but the larger portion is sent to Rome from England. Mr. Shepherd, the engineer, who has been honoured with frequent marks of approbation from his Holliness, had earned some celebrity in his profession before visiting Rome, having erected the gas works at the Hague, Cadiz, Bologna, Modena, and other places.

THE QUEEN V. THE LYNN VALLEY RAILWAY COMPANY—NON-REPAIRS OF A RAILWAY.—In the Court of Queen's Bench, on Thursday, Mr. Manisty was instructed by the Lynn Valley Iron Company to move for a mandamus, to compel the defendants to put their railway in a proper state for public use. It was a public railway, and the Iron Company had large works at one end of it, and they and others had occasion to send large quantities of mineral along it in the course of the year; but for the last two years it had been utterly unfit for public use. It appears that the powers of the company had been derived originally from an Act obtained in 1825, but that statute had been subsequently varied and amended, and in 1855 all former covenants were repealed, and the company reconstructed, power being given to them, to make a new line running in a parallel direction with the old railway, and to abandon the latter if they chose to do so, but they had not made the new line, nor exercised the power of abandonment as regarded the existing line; on the contrary, they had repeatedly intimated their intention to put the existing line in a state of repair.—Rule n° 4 granted.

CARN BREA MINES.—From the annual report of the committee of these mines, it appears that, though the progress made has not been so great as was anticipated, the mines yield large returns, and leave a moderate profit. In 1856 this amounted to 2641. 4s. 4d., and the returns do not spring mainly from the sale of copper ore as heretofore, but "rise equally from copper ore and black tin." Acting upon a former resolution, the committee have exchanged with the Rev. Mr. Scott a counterpart of a lease of his part of Tregajorran, from which they are now raising produce of larger amount than is sufficient to pay the annual rent reserved. As to the other parts of Tregajorran, one portion of which belongs jointly to the Rev. Mr. Scott and Lord Clinton, and the other to Lord Clinton alone, the counterparts of leases have been returned to the lessors so far as duly executed, and the committee expect shortly to receive the leases executed by the lords. Lease has been granted from the steward of Mr. Bassett (lord of the Carn Brea seat) to work the Tregajorran seat through the levels and shafts of Carn Brea. Captain Joseph Lyle reported upon the various points of operation, and states that their expenditure in the past year has been increased by the removal of Syke's whim-engine to Burncoose, and laying down a railroad to carry the tinstaff to the stamp, also by taking up old pitwork and fixing new. From the progressive improvement at Burncoose, and the promise of renewed productiveness on Teague's lode, he considers they have a prospect of returning monthly from 300 to 400 tons of copper ore, and about 40 tons of black tin.

\* \* \* With next week's MINING JOURNAL we shall give a SUPPLEMENTAL SUMMER, in which will appear—Practical Mining: Jigging Ores; Rocks and Mineral Deposits of Namaqualand—No. VII.; Geology: Private Lectures on the Earth—No. VI.; The Lectures delivered at the School of Mines; and several matters now unavoidably postponed.

#### The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET, London, June 5, 1857.

COPPER.	£. s. d.	FOREIGN STEEL.	Per Ton.
Copper wire .....	per lb. 0 1 3—	Swedish, in kgs. ....	21 5 0—31 10 0
ditto tubes .....	0 1 3½—1 4	to arrivate .....	21 10 0—21 15 0
Sheathing and bolts .....	0 1 1—	Ditto, in faggots .....	22 10 0—23 0 0
Bottoms .....	0 1 1½—1 2	English, Spring .....	18 0 0—33 0 0
Old (Exchange) .....	0 1 1½—	QUICKSILVER.	per lb. (nom.)
Best selected .....	0 1 0—1 0 0	SPLEITER.	Per Ton.
Tough cake .....	11 7 0—9 0—	Foreign .....	30 0 0—30 5 0
Tile .....	11 7 0—9 0—	To arrivate .....	30 10 0—
South American .....	—	IRON.	—
.....	—	In sheets .....	35 10 0—
Bar, Welsh, in London .....	8 10 0—8 15 0	TIN.	—
Ditto, to arrivate .....	8 5 0—	English, blocks .....	154 0 0—
Lead rods .....	9 0 0—	Ditto, Bars (in barrels) .....	150 0 0—
Bar, Stafford, in London .....	9 5 0—10 0 0	Ditto, Refined .....	138 0 0—
ditto .....	9 7 6—10 0 0	Bancks .....	138 0 0 (nom.)
Hoops .....	10 10 0—11 0 0	Straits .....	130 0 0—132 0 0
Sheets, single .....	11 0 0—11 0 0	TIN-PLATES.	—
Fig. No. 1, in Wales .....	4 10 0—5 0 0	IC Charcoal, 1stqua. p. lbs. ....	2 0 0—2 1 0
5d. metal, ditto .....	5 10 0—5 15 0	IX Ditto 1st quality .....	2 0 0—2 7 0
Ditto, rail way, ditto .....	7 5 0—7 10 0	IX Ditto 2d quality .....	1 17 6—1 18 6
in stock to arrivate .....	15 0 0—16 0 0	IX Ditto 3d quality .....	2 3 6—2 4 6
Pig. No. 1, in Clyde .....	4 1 6—4 2 5	IC Coke .....	1 14 0—1 15 6
Iron, in Tyne and Tees .....	3 11 0—13 15 0	IX Ditto .....	2 0 0—2 1 6
Ditto, forge .....	3 10 0—	Canada plates .....	p. ton 16 0 0—16 10 0
Staffordshire Forge Pig. ....	4 12 0—5 0 0	In London .....	30s. less at the works.
Welsh Forge Pig .....	3 12 0—4 0 0	Yellow Metal Sheathing .....	p. lb. 11½ d.—
LEAD.	—	Stirling's Pat. Met. ....	p. wt. 2 2 0
English Pig .....	24 0 0—25 0 0	Stirling's Non-laminating, or Hardened, Surface Rails, p. ton .....	9 0 0—9 2 0
Ditto sheet .....	25 0 0—25 10 0	Surface Rails, p. ton .....	9 0 0—9 2 0
Ditto lead .....	25 10 0—26 0 0	Stirling's Patent .....	—
Ditto white .....	27 0 0—28 10 0	Toughened Pigs .....	—
Ditto patent shot .....	27 0 0—27 10 0	Ditto .....	—
Spanish, in bond .....	23 10 0—35 15 0	Indian Charcoal Pigs .....	—
American .....	—	in London .....	—
Bans (sheets) .....	11 ½ d.—12d.	—	7 10 0
Wire .....	11d.—11½d.	At the works, 1s. to 1s. 6d. per box less.	—
Tubes .....	13d.—14d.	—	—

\* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The alteration in the prices of metals, suggested in our last week's Journal, has been realised, as will be observed by the quotations.

The market at present has not undergone any great improvement, but we hope shortly to be able to announce a good demand for most descriptions.

COPPER.—Yesterday it was announced, in course of the morning, that the smelters had reduced prices of rolling and melting qualities 9d. per ton, and sheet, sheathing, &c., 1d. per lb. Yellow metal and brass have also declined 1d. per lb. The last three sales of ore have shown a gradual decension.

IRON.—In English and Staffordshire little or no change has taken place, the market continuing quiet but steady. The Scotch pig-iron market has taken a singular turn, and it is reported that the press for warrants has been so great, that even 100s. per ton was paid in Liverpool. At the close of business on "Change to-day warrants were 90s., but no buyers above 82s. 6d. to 83s

At the Swansea Ticketing, on Tuesday, 1,582 tons of copper ore sold for £1,040. 1s. From Namaqualand, 243 tons realised 69,691. 6s.; the Burna Burra ore, 67,691. 18s.; Knockmahon, 458 tons, 59,061. 3s. 6d.; Berehaven, 26 tons, 31,51. 16s.; Holyford, 53 tons, 10,161. 15s.; Cronabane, 30 tons, 200. 9s. 6d.; Tigray, 3 tons, 99. 16s. 8d.; Peninsular, 45 tons, 31,61. 14s.; Castilian, 27 tons, 242. 4s.; Sydney, 38 tons, 551. 7s.; Gloucester Slag, 18 tons, 685. 1s.; Bampfylde, 27 tons, 416. 9s. 6d.; Sygun, 27 tons, 121. 17s.; Australian, 3 tons, 68. 1s.; Cape, 1 ton, 26. 7s.; Great Barrier, 37 tons, 601. 5s.—The next sale, on June 9, will be 1,424 tons, from Cobre, Berehaven, Burna Burra, Sevilla, Garrucha, and Marseilles.

In Saltpetre, the market has been active, and better prices obtained; a very fair amount of business has been done throughout the week.

**IMPORTATION OF BULLION.**—An extraordinary amount of bullion has been received this week—nearly a million and three-quarters, and therefore exceeding the imports of a similar period for some time past. From Australia the arrivals have been—per *Sussex*, 192,000l.; *Walter Castle*, 160,000l.; *Morning Star*, 160,000l.; *Sydenham*, 125,000l.; *Medway*, 72,000l.; *Donald M'Kay*, 48,000l.; and *Wave of Life*, 16,000l. From Mexico, the *Parana* brought 633,200l., and the *Eurota*, from America, 213,000l.; these, with 67,000l., per *Paras*, from the Mediterranean, makes the import for the week to be 1,625,900l. The shipments by the Peninsular and Oriental Company's steamer on the 20th, will, probably, reach nearly 1,000,000l.

At Wheal Bassett meeting, on Tuesday, the accounts showed—Balance last audit, 1,053. 5s.; ores sold (deducting 1-15th dues, 559. 3s. 6d.), 7,834. 14s. 6d.; 2,901. 13s. 6d.—Mine cost for March and April, 31,01. 8s. 12d.; merchants' bills, 606. 11s.; income tax, 163. 4s. 6d.; loss on south mine (the labour cost and merchants' bills being 267. 13s. 7d.), against sales of copper ore, deducting 6. 15s. dues at 1-15th, 94. 10s. 1d.; 173. 3s. 7d.; leaving a balance in favour of the adventurers of 5,901. 10s. 5d. A dividend (the 35th) of 4096. 8s. per share was declared, and 1,017. 5s. 10d. carried to the credit of next account. Capts. W. Richards and J. Pope reported that the stopes and pitches throughout Wheal Bassett were still producing fair quantities of copper and tin. They were driving several other levels on different lodes, which were at present unproductive. At Carnkie, they have several pitches working on copper and tin, which are still looking well. In the south mine, they have pitches working at 12s. in 14.

At West Cardigan Mine meeting, on May 30 (Mr. A. Harris in the chair), the accounts for Jan. and Feb. showed—Balance last audit, 2,845. 6s. 9d.; ores sold and carriage (deducting lord's dues, 376. 18s. 6d.; 563. 9s. 4d.; materials bills, 506. 1s. 9d.; property tax on property, 84. 8s. 10d.; third instalment on shares in East Welsh Agar, 74. 7s. 6d.; April dividend, 1,024. 1s. leaving balance in favour of mine, 2,236. 1s. 10d. The profit on the two months' working of the old mine amounted to 765. 13s. (3s. per share) was declared, and 1,498. 4s. 6d. carried to next account. It was estimated that the balance at next meeting would be 2,236. 1s. 10d. Capts. H. Taylor, John Buxton, and Wm. Taylor reported upon the several points of operation. The returns for the last two months had been 792 tons, and their next sampling would be about 350 tons of average quality ore.

At Boscombe Mine meeting, on May 29, the accounts showed—Balance from last audit, 1,012. 6s. 10d.; tin ore sold, 489. 9s. 6d.—641. 15s. 18s. 4d.—Labour cost for Jan., Feb., and March, 2,906. 19s. 6d.; merchants' bills, 721. 5s. 2d.; stamp, rent, taxes, &c., 102. 2s. 2d.; coal, 233. 10s. 1d.; lord's dues, 192. 12s. 9d. A dividend of 3s. per share (720s.) was declared, and 1,621. 13s. 1d. carried to a credit of next account.

At Collacombe Mine meeting, on May 28, the accounts showed—Balance last audit, 1,038. 18s. 9d.; copper ore sold, 2,267. 1s. 7d.; carriage, 99. 2s. 1d.; 37,351. 2s. 5d.—Dividend (declared March 28, 1850.); mine costs for March and April, 599. 0s. 7d.; merchants' bills, 163. 12s. 3d.; lord's dues, 75. 1s. 7d.; secretary's salary, &c., 114. 2s. 3d.; leaving balance in favour of mine, 1,501. 19s. 8d. Ores bill due and ores sold, May 21, amounted to 2,220. 4s. 4d. A dividend of 1s. per share was declared, and the next general meeting appointed to be held on July 30. A special general meeting was then held, at which it was resolved—that the mine be divided into 500 shares, instead of 1,000, as heretofore.

At Ding Dong Mine meeting, on June 1, the accounts showed—Balance last audit, 1,010. 5s. 4d.; tin ore sold, 271. 15s. 8s.; sundries credit, 31. 11s. 6d.—642. 19s. 7s. 4d.; 79. 9s.; purser's salary, &c., 181. 11s. 6d.; coal, 118. 3s. 2d.; 1,401. 18s. 14s. 6d.; leaving balance in favour of mine, 1,613. 6s. The profit on the three months' working was 402. 17s. 6d. Capts. J. Truran and M. Daniel reported that since the last meeting the underground operations had been steadily progressing; but that the quantity or quality of tin ground had not improved, and the returns for the quarter ending June 30 would not be equal to the last. The principal failing off was below the 30 on the white lode. The average number of men on tutwork had been 89 at 6s. 3d., and 31 on tribute at 70s. 3d. per month.

At Tokbuney Consols meeting, held on May 30, the accounts showed—Balance last audit, 43. 17s. 8d.; calls received, 100. 7s.; sundries credit, 71. 18s. 3d.; 215. 10s. 11d. Labour cost for four months to end of March, 70. 19s. 6d.; materials, 10s. 1s. 1d.; leaving balance in favour of mine, 134. 10s. 10d. Capt. W. Taylor reported that the operations had been confined to driving, by four men, a cross-cut south to cut the lode east of great cross-course. The ground had changed, and they were getting near the lode.

At Brynford Hall Mine meeting, on May 21 (Mr. Walter Bostock in the chair), the accounts showed—Balance last audit, 239. 11s. 11d.; ores sold, Jan., 451. 4s. 6d.; Feb., 319. 6s. 7d.; March, 153. 1s. 10s. 4d.; 117. 1s. 4s. 6d.—Mine cost, Jan., 262. 6s. 7d.; Feb., 257. 3s. 1d.; March, 230. 15s. 10d.; royalties, 92. 15s. 1d.; leaving balance in favour of adventurers, 329. 3s. 3d. Capt. Wm. Francis reported that they might fairly calculate on being in a better position in three months hence.

At Great Sortridge Consols Mine meeting, on Monday, the accounts showed—Cash shown in hand last meeting, 101. 15s. 1d.; calls received, 210. 4s. 2d.; 200. 15s. 5d.; three months' mine cost, machinery, erections, and sundries, 250. 6s. 3d. Due for calls unpaid, 58. 7s. 6d. A call of 1s. per share was made. The agent reported that the erection of miners' lodging-hou., smelt., &c., was within a few days of being completed, the wheel-pit finished, the wheel on the mine, and the last nearly ready. Four men are driving the low level, and two men driving a drift from rise No. 1 to rise No. 2 in Sir John's vein, in order to ventilate and open the ground for stopping by the time the crusher is erected. One man and two boys are engaged in grating the ore surface. From rise No. 2 the men have driven 27 ft. from the west towards the east cheek of the vein, without meeting with another cheek. The vein contains the whole width.

At the Tees Side Mine meeting, at Newcastle-on-Tyne, on Tuesday (Mr. R. D. Davidson in the chair), the accounts showed—Balance against the mine, £20,425. 9s. 7d.; four months' mine cost and salaries, 341. 1s. 10d.; 705. 11s. 5d.—Lead ore sold, 261. 1s. 5d.; cash received for calls, 418. 11s. 6d.; leaving a cash balance against the mine of 861. 12s. 6d. The amount due for calls was 116. 11s., and the lead ore at surface was worth 250s., leaving balance in favour of the mine of 189. 18s. 6d. The captain's report stated that good ore was being raised from the 60 ft. of the level at Metal Band, and that the water had been easily forced at Metal Band. The purser informed the meeting that the lord had agreed to a reduction of dues from 1-7th to 1-10th above water level, and from 1-10th to 1-15th below.

At Lambest Consols meeting, at Plymouth, on May 28 (Mr. Hicks in the chair), the account showed—Mine cost to end of March, 72. 1s. 11d.; leaving balance in hand, 18. 17s. 1d. A call of 6s. per share was made, to defray cost of engine and the next two months' working. This call, as will be seen by the captain's report, in another column, presents great prospects of success.

At Horward United Mines meeting, on May 21 (the Rev. J. Husband in the chair), the accounts showed—Mine cost and merchants' bills, Jan., Feb., and March, 708. 12s. 11d.—Balance last audit, 101. 8s. 7s.; ores sold, 1,062. 5s. 5d.; calls received, 410. 1. leaving balance against adventurers, 101. 16s. 11d. A call of 10s. per share was made. Capts. J. B. Lightoller and Absalom Francis reported favourably of the adventure.

At the Bolehowna Mine special general meeting, on Wednesday, the accounts for the five months ending March showed a balance due to the treasurer of 173. 1s. 5d.; and arrears of 76. 7s. 12s. A call of 1s. per share was made, the committee directed to urge the payment of all calls in arrear, and Capt. W. Roberts was instructed to suspend all operations not considered necessary at the mine.

At Lelant Consols meeting, on May 26 (Mr. E. H. Rodd in the chair), the accounts for six months ending March showed—Labour cost, 1,492. 1s. 11d.; merchants' bills, 549. 1s. 9d.; loss on shares sold by the Vice-Warden, and costs, 87. 10s. 6d.—2099. 16s. 2d.—Balance last audit, 210. 1s. 5d.; tin sold, 1,023. 7s. 1d. Leaving balance against mine, 450. 15s. 3d. A call of 1s. per share was made. Capt. James Williams reported that he would recommend drawing the water on the cauld lode, where there is a cross-tow to their south lode, with a buck dam in it, which might be tapped, and the flat-rod shaft would keep the water during the summer. Capt. B. Champion advises the adventurers to persevere a little longer, and he has no doubt they will be rewarded for the capital laid out.

At Nant-y-Car Mine meeting, at Gainsborough, on May 29, the reports of Captains Stannins and Rogers were highly satisfactory. From the position this mine was taking in the sales of ore, and from the richness of ore as they increase in depth, this mine would soon be a dividend-paying one. A new lease had been obtained from June last for 21 years, and the due granted at a moderate rate.

At Silver Valley Mine meeting, on May 27, the accounts showed—Balance last audit, 336. 1s. 10d.; mine cost, Feb., March, and April, 339. 5s. 2d.; merchants' bills, 132. 17s. 2d.; calls received, 512. 1s.; old iron sold, 31. 1s. 7s. 6d.; leaving balance against mine, 258. 7s. 2d. A call of 5s. per share was made. Capt. F. Evans and T. Wesley reported that they were driving a cross-tow east, to search for a lode which they sink in the new shaft south of their present one in the 12 ft. level, and which was composed of gossan of a good character; this lode not having been cut below the surface, had so much water as to hinder them from sinking the shaft. The cost for the next two months was estimated at 300s. Capt. Shaws and Naracrow have inspected the mine, and each considers that the prospectus warrants a fair trial.

At the Bedford Consols meeting, on Wednesday (Mr. John Rowlands in the chair), a call of 1s. 6d. per share was made. A special general meeting will be held on the 19th inst., to forfeit all shares then in arrear of any call made previously to this date. The captain was directed to use every exertion to communicate the old working, when he confidently expects that a few fathoms further sinking on the ore gone down in the bottom of the shallow adit will lead to very important results.

At Wheal Emma meeting, on Wednesday, the accounts showed—Balance due to purser last audit, 91. 3s. 2d.; sundry accounts paid out of liabilities existing March 4, 229. 12s.; cost-sheets for Feb., March, and April, 1,136. 17s. 11d.; bills paid since March 4, 74. 5s. 1d.—Copper ore sold, 11,37. 19s. 6d.; leaving a cash balance due to purser of 394. 18s. 8d. The statement of assets and liabilities showed a balance in favour of the mine of 581. 1s. 5d. Mr. Hitchins' report of the mine will be found among our reports.

The Brook Wood meeting of adventurers was adjourned to the 26th inst.

The Kelly Bray Mining Company convened a special general meeting for Thursday last, for the purpose of forfeiting all shares in arrear of call; but, as all the arrears had been previously paid, no meeting took place.

Copper Hill Mine made a call of 5s. per share on Tuesday.

At United and St. Day United Mines meeting, on Monday, the captains reported that the pitwork and materials had been taken up to the 160, and that the water had risen to the 175, and continued to rise. It was resolved that the question whether, and when, the pitwork and materials shall be taken up above the 160, in Davey's shaft, shall be referred to the committees of the United and St. Day United Mines, and if they feel satisfied that the pitwork and materials in that shaft may be safely taken up above the 160, that they be authorised to proceed to take up the same accordingly. That all the pitwork and materials (except those above the 160, in Davey's shaft) be taken up, and, together with the steam-engines, offered for sale; that Mr. F. Pryor be instructed accordingly, and as soon as may be, to proceed with such sale; and that application be made to the lords for a license to work, during the lord's pleasure, above the water level, at 1-30th dues. Notice was agreed to be given to the United Mine adventurers, that in consequence of the total suspension of the pumping engines in the Consols Mine, the monthly charge paid by the St. Day United Mines for working Wheal Andrew engine would cease from the end of the present month.

At the General Mining Company for Ireland half-yearly general meeting, held on Monday, at Dublin (Sir James Murray in the chair), the report stated that, for the half-year ending April 3, the working expenditure had exceeded the amount realised by the sales of ore, but that two of the directors had visited the mines, and expressed a favourable opinion of their prospects. The directors had determined upon reducing their own remuneration from 250s. to 150s. In December they effected the registration of the company, with limited liability, but found that they were unable to reduce the number and nominal value of their shares, there having been no special power to do so in the deed of settlement. The account current for the year ending April 2 showed receipts 47,634. 0s. 5d. expenditure 40,835. 8s. 8d. Messrs. F. Kay, Kidd, and Overend were appointed auditors, and the following gentlemen were declared elected directors for the ensuing year:—P. Burrows, S. H. Blackwell, W. H. Carroll, R. Carroll, P. M'Evoy, Garlan, Sir J. Murray, and T. Wood. The Chairman said that after having served them 12 years he had made up his mind to resign his position as chairman of the company.

Bwlch Consols sold, on May 30, 30 tons silver-lead ore, at 17. 1s. per ton. Daren Mine sampled 12 tons silver-lead ore, for sale on 8th inst.

Pedin-an-drea United Mines sold, on May 30, 11 tons 6 cwt. of black tin, amounting to 771. 9s. 6d. The mine, as will be seen by the report from the agents, is considerably improved, and the prospects in the deeper levels are such as to warrant the expectation of larger sales of tin at an early period.

At Abbey Consols, Capt. Edward Williams reports that the dressing is getting well; they will sample 20 tons this day.

At Cwm Sebon, the sinking of the engine-shaft under the 60 has been resumed, and in which there is a very good lode. In the 30, the tributaries have discovered a very good branch of ore going off, which may prove to be the main part of the lode, and if so, would be important. The stopes are looking well.

At West Rosewarne, the lode in the 30 west is large and promising.

At North Laxey, the 12 is improved; in the south end there are some good branches of lead ore, and the split parts are coming together; in the north end there is a regular firm lode, with stones of ore.

From Great Cinnis Mine, Captain S. S. Bice reports that the several pitches set on tribute vary in value from 2s. 10s. to 7s. per fm. In the back of the 50, east of Union shaft, the lode is estimated to be worth 8s. per fm.

From Great Wheal Fortune, Capts. R. Pryor and Joshua Daniel report that the tribute department employs 53 men, at tributes varying from 6s. to 18s. 4d. in 1s. They are preparing for the building of the engine-house, which will be commenced next week.

At the New Fort Bowen Mining Company meeting, on Thursday (Capt. Charrisse in the chair), the accounts showed balance in favour of mine, 94. 10s. 4d. The retiring directors and auditors were re-elected, and Mr. Whitelock, in the room of Mr. James Clay, M.P., who had resigned, and Mr. C. Powell, of the firm of Powell and Cooke, as a new director. The proceedings terminated with a vote of thanks to the Chairman.

At the Australian Freehold Gold Mining Company meeting, on Thursday (Mr. Warrand in the chair), a resolution was passed to stop the proceedings in Chancery, and to divide the assets in hand. The proceedings are fully detailed in another column.

At the Clarendon Mining Company of Jamaica have advices from Mr. A. Tregoning, destined for Jamaica, May 10. He was to leave Kingston for the mines on the following day.

Several scientific gentlemen, accompanied by some of the large shareholders, will this day visit the works of the Chanceryville Freehold Gold Company, at Frodsham, Cheshire. We shall next week publish detailed reports of the particulars, with a statement of the quantity of gold extracted each day.

At the Swanses sale, on Tuesday, 37 tons of Great Barrier copper ore were sold for 601. 5s., or 16s. 5s. per ton. We understand that upwards of 100 tons were also sold lately, by private contract, at 17. 5s. per ton.

In Foreign Mines, the principal feature during the week has been the fall in Cobre Copper, which, after gradually declining, were dealt in yesterday at 53s., 54, 53s. St. John del Rey and Copiapo were rather firmer; the former closed at 15 to 17, and the latter 12 to 14. Royal Santiago and United Mexican showed an improvement. The quotations will be found in the usual column.

In Miscellaneous Shares, the market has been dull, and prices remained without alteration worthy of notice. In Joint-Stock Banks, there have been more enquiries. The quotations will be found in another column.

Our Hull correspondents (Messrs. T. W. Flint and Co.) report that the market for railway shares continues to show some slight fluctuations, but we have no important alteration to notice. The different classes of North-Eastern stock are, however, in request, and command advanced prices. There is also more enquiry for some of the lighter stocks.

Our Sheffield correspondents (Messrs. E. Smith and Son) report that prices of mining shares have rather advanced. Brightside Mine shares have been done at 4s., and more offered for; Chapel Dale shares firm, at 3s. to 1 prem., but few offering; Crafnaught shares have changed hands several times at 1s.; Eym in demand, at 6s. 6d. to 8s. 6d.; Peak United nominal, at 1s. to 2s.; and Prince of Wales shares enquiry for, eagerly, at 1s., call paid. The Eym Mining Company sold last Thursday about 140 tons of ore, and had 20 tons more ready for sale; they declared a double dividend, of 20s. per share, being only four weeks since the last dividend.

The number of pumping engines reported in *Brown's*

THE PROGRESS OF MINING IN 1856,  
BEING THE THIRTEENTH ANNUAL REVIEW.  
By J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published  
in 1843), *Gleanings among Miners and Miners*, &c.

The THIRTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in a SUPPLEMENTAL SHEET to the MINING JOURNAL of Jan. 3, 1857.

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Mr. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER ENDING 31st March, 1857, with Particulars of the Position and Prospects of the principal Dividend and Progressive Mines. Tables of the Dividends paid in the past Quarter, and in the Years 1855 and 1856, and a MAP of the ALFRED and ROSEWARNE MINING DISTRICTS, &c., are NOW READY, price 1s.; at Mr. Murchison's office, 117, Bishopsgate-street, Within, London.

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See advertisement in another column.

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MAP OF ST. JUST MINING DISTRICT.—

This MAP is NOW READY FOR DELIVERY. Price, mounted, 2s.; delivered in London, carriage free, to any address.—Please send early orders to the publisher, R. SYMONS, surveyor, Truro.

ST. IVES, LELANT, AND TOWEDNACK MINING DISTRICT.—

Mr. TREWEENE begs to inform his friends and the public generally that his MAP of the above DISTRICT, and a STATISTICAL ACCOUNT thereof for the past 30 years, is NOW READY, and will immediately be sent to any party who may require a copy, on the receipt of 14 postage stamps.

Dated at St. Ives, April 9, 1857.

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AUDITORS OF ACCOUNTS; their Duties and Qualifications.

By HENRY LLOYD MORGAN, Public Accountant.

The pamphlet contains many most important suggestions, and is well worthy of the attentive perusal of shareholders in joint-stock companies.—Morning Post.

Effingham Wilson, publisher, 11, Royal Exchange, E.C.

### Notices to Correspondents.

•• Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

MANGANESE.—I see by your recent Journals that the General Manganese Company, Ehrenstein, are dealers in this mineral, and, therefore, beg to enquire whether this company is connected, directly or indirectly, with the Giessia Manganese Company, who have hitherto been supposed to have almost the monopoly of the English trade. As all consumers prefer an open to a closed market, it would be highly advantageous to all firms, who can supply manganese at Rotterdam, to let their names be known through your Journal, making it apparent that they are unconnected with any other company. They will find many to support them simply upon principle, and will, no doubt, find a good market in England at a remunerative price.—C. A.

MINING IN THE ALPS.—Some few weeks since you had a notice of a new adventure for working some mines in the Alps; could you give me any further information, as to whether the enterprise is likely to be carried out, I should be glad. It would be particularly interesting to know the altitude at which it is proposed to work, and also the number of months per year that the working would be accessible. There are, no doubt, some very excellent districts in the Alps which could be made to yield profits by economy and judgment, but these two essential elements have hitherto been wanting. C. D.

“Chemist” (Glasgow).—The question is one of considerable importance, and was not misunderstood. It has been submitted to an eminent metallurgist, and as soon as the result is attained, it will be communicated.

LIGHTING RAILWAY TRAINS WITH GAS.—In your Journal of last Saturday I read that two gentlemen had simultaneously proposed the lighting of railway trains with gas, and think the suggestion for placing the gas in one holder on a separate truck next the tender is by far the most practical, notwithstanding the necessity for connecting and disconnecting the pipes between each carriage. Indeed, I consider that by the following arrangement there would be no difficulty whatever in this respect, as little elastic tubing would be required, and when the carriages were coupled or uncoupled the gas tubes would act of themselves. Carry an ordinary iron pipe along the centre of the carriage, either above or beneath; then with half a foot of elastic tubing connect another piece of pipe, about 3 inches more than sufficient to reach the corresponding piece of the next carriage; the pipes must be brought into close contact, the tubing answering merely to suit the curves of the line, and the shorter pieces must be fastened with pivots to keep them in position. The back connecting piece must be of sufficient size to allow the front piece of the next carriage, thus forming a male and female joint. The female joint has a packing, so that the joint may be gas tight, and beyond the packing is a valve, which is opened by the introduction of the male joint, and closes immediately that it is withdrawn. By this arrangement, if a carriage were accidentally uncoupled, there would be no loss of gas, nor any inconvenience, beyond the extinguishing of the lights in the disconnected carriage.—J. B.: Belfast, June 2.

IMPERIAL BRAZILIAN MINING ASSOCIATION.—“G. C. B.” (Bedford).—The directors expect to receive despatches from Mr. Joel Hitchens about Saturday next. The object of adjourning the meeting, called for the purpose of winding-up, was not with a view of continuing operations, but that the board might receive two despatches from Mr. Hitchens, by which, from certain negotiations at present going on, they expect to get a better price for the property. The Chairman at the meeting said it would not be advisable at the present time to state the nature of the negotiations.

MANUFACTURE OF IRON DIRECT FROM THE ORE.—About the time when Mr. Bessemer read his extraordinary and attractive paper at Cheltenham, there was an invention talked of as belonging to Dr. Gurit, which I believe consisted in employing a long tubular furnace, inclined at an angle of 45° and having the tuyeres introduced about the centre. These tuyeres were supplied some with pure oxygen and some with atmospheric air. The object of this arrangement was to admit of the mineral, which was fed in at the upper end of the tube, being heated before it arrived at the portion of the furnace directly acted upon by the blast, whereby economy of fuel was obtained. As I do not admit that pure oxygen can be advantageously used in any blast furnace, I of course do not altogether agree with Dr. Gurit; but I certainly think a modification of his invention would be one of the readiest means of producing malleable iron direct from the ore. The way in which I would proceed is as follows:—Construct two tubular furnaces, one 16 ft. long, on the upper side and 4 feet in diameter—the other 10 feet long on the upper side and 4 feet in diameter, the ends of each of them being so formed that the top shall be horizontal and the bottom perpendicular. The longer furnace would be a substitute for the blast furnace, and the shorter the refinery. An ordinary paddling furnace is erected, to the feed-hole of which a horizontal trough for conducting the molten metal is attached, and communicates with the bottom end of the refinery, which goes upward at an angle of 45°; another nearly horizontal trough or receptacle connects the top end of the refinery to the bottom end of the blast furnace, which is also inclined 45°. The bottom end of each is closed, and tuyeres introduced; and the whole is then ready for work. Feed in the ore and fuel at the upper furnace, and admit in the ordinary manner; when the charge is fit to be tapped let the molten metal run into the trough and the slag be skimmed off. Whilst the metal is running into the refinery, add to it as evenly as possible pulverised charcoal or coke, together with such fluxes—manganese oxides, &c.—as may be required, according to the quality and description of mineral, applying the blast simultaneously, so as to prevent the tuyeres becoming choked. When sufficiently acted upon, it may be run into the lower trough, and thence, after the slags have been skimmed, into the paddling furnace, where it is paddled in the usual manner. The result of this arrangement would be that fuel would be economised, and iron obtained of the best quality; especially applicable to the manufacture of the best steel.—C. H.: June 2.

ANGLO-AMERICAN GOLD MINING COMPANY.—Had the directors called a public meeting immediately after Sir Henry Huntley's return from California, inviting those gentleman to attend, they would have had a good muster of the shareholders. I have before me several of their circulars, and find that in one I am asked to contribute because Sir Henry Huntley has contracted a debt with Mr. Burgoine. Now, I am told the property is again seized for a debt incurred by the same party. Why have not the directors regularly every year published an account of the expenditure? Who, I would enquire, has ever audited the cost of mining in California, or the hotel expenses at San Francisco, which the directors themselves acknowledge to have been extravagant? I would ask why it was that, at the Freemasons' Tavern, Mr. Bartlett and Mr. Massey Dawson so deceived us with the result of Sir Henry Huntley's sufferings and privations in California?—“having but a miserable canvas tent, and sitting under a tree to sew buttons on his clothes.”

This we were told, with much more. Then Dicksburg was bought and paid for, for the “ridiculously small sum” of 5000/-; and after a fortnight's trial was abandoned, because there was a better location in Brown's Valley. We had the Keystone, the Caroline vein, and I know not how many more—on paper. We all knew how the company was originally formed, and that Sir Henry Huntley was first sent out to California by Mr. Luke Williams. Whether he ever met Mr. Tremain, who wrote the first fallacious report, is questionable. From the formation of this ill-conducted association until the present time I have always been a shareholder: I had good faith in the directors, and I have now a great opinion of their honesty, but of their capacity I will say but little. They are good, well-meaning men, but have been trammelled too much by routine, and for fear of hurting the feelings of their servants they have sacrificed the interests of their constituents. I trust that some result will shortly be arrived at. It were far better that the affairs of the company should be wound up than that they should remain in their present unsatisfactory condition. The property, according to all accounts, is one of the best in California; and if, through gross neglect and dire mismanagement, both at home and abroad, we have not been able to work it, let us resign it to those who have greater ability and more prudence for the task which we undertook, but so lamentably failed in the performance. The career of this gold company has been similar to many of its competitors, though it has failed from totally different causes.

—PARASUS: June 1.

CORNISH PHOTOGRAPHS.—We this day commence the publication of a series of enter-taining articles, illustrating the customs and characteristics of Cornish Miners, by George Hinwood, whose contributions to the *Mining Journal*, *Mining Lectures*, *Cornish Dialogues*, and *Christmas Tale*, are so well known. The Cornish Photographs, as they are entitled, is commenced by The Setting and Pay Day, to be followed by The Miner's Funeral—The Engine Opening Day—The Sampling Day—The First Dividend—Counting-hous in 1857, and Counting-hous in 1857—The Miners' Holiday, Midsummer Day—The Chapel—The Captain—The Purser—The Doctor—The Landlord—The Summary.

RATING OF MINES.—As it is highly important that the course usually adopted by coal mine proprietors should be reported to all who are indifferent as to the success of the bill now about to be reported by a select committee, from the tax falling in the first instance upon lords, permit me to enquire, through your columns, whether it does not almost invariably happen that the lord will only grant a lease on condition that the tenant agrees to pay all rates which may be levied, in addition to the regular royalties. I have little doubt myself that the owners always thus protect themselves, and if I am correct in my opinion I think that the simple knowledge of the fact will cause every miner to strain every nerve to prevent the measure from becoming law.—A. M.: Buckfastleigh, June 1.

RATING OF MINES.—The defective construction of our vessels is becoming a great and fruitful source of complaint. Lieut.-Col. Lloyd has published a letter to the United Service Club, in which he states that bodies of our ships are so built that they cannot resist the force of the waves; and this he is prepared to show by hydrostatical experiments. The question is now becoming of such importance, that it is necessary that prompt attention should be paid to it. It is needless here to recapitulate the various losses that are almost daily occurring. The ironmasters and merchants are interested in this question, which more or less affects all members of the community; but, in many cases, too great pertinacity and assumption on the part of individuals has been known to damage a good cause.

MANAGEMENT OF JOINT-STOCK COMPANIES.—It appears to be the opinion of some parties that the introduction of an Act of Parliament rendering directors criminally liable for their actions would prevent respectable men from taking any part in the management of public companies. But surely the greatly increased guarantee which this would behead become connected with reckless individuals would more than counterbalance a little increase of stringency in the law. My opinion of the probable effect of such a measure is that it would prevent any person becoming a director unless he could attend to his duties, and that this is the only class of persons who would be prevented from accepting office. Should such be the case, the result will be beneficial, in the highest degree, to all parties, since none but working directors will be on the direction, and each will be so far as possible of his own character that one director of integrity will compel the whole to act well. If such a measure becomes law, a period of prosperity, both to mining and other industrial enterprise, may be anticipated; and an amount of confidence will be shown towards joint-stock companies which have never previous enjoyed.—C. H.: City, June 4.

WHEAL HENDER AND LADY BERTHA.—“W. J.”—The offices of Wheal Hender are at Gwinear—Mr. Wm. Huthnance is the purser. The offices of Lady Bertha are at St. Helen's-place—Mr. Pest being the secretary.

RATING MINES TO POOR-RATES.—Until within the last quarter of a century it appears that the lords were regularly in the habit of paying rates upon dues, and that it was solely from one person being allowed to infringe the law with impunity that the present state of affairs has been permitted to creep in; yet as the Legislature took no steps to cause the lords to continue their payment until the beginning of the present session, I do not think the mine adventurers will find it an easy matter to compel the lords to pay any tax which may be put upon them. I fear that the bill now spoken of will become law, and that should soon be the case, the adventurers will have to pay the rate. By a careful calculation, it will be found that to companies working mines the measure will make very little difference, since in the most heavily taxed district it will not increase their calls more than 2d. per share per year, and, in the majority of instances, it will amount to considerably less than 1d. I consider it quite as well that these facts should be known, since, from what has been said upon the subject, the uncalculating would be liable to fall into error, and suppose that the passing of the bill would be the ruin of mining altogether, and that henceforth no profit could possibly be made. So far as I understand the question, I believe it is the private individuals who may be working mines who will feel the effect of the bill most acutely, as the rate will fall upon them in one amount, and not divided into infinitesimal proportions, as will be the case with the public generally.—T. T.: Truro, June 2.

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ally addicted to it? We tremble for the consequences, unless firmness and vigour be at once exercised. These sink into insignificance, compared to what will accrue if any misunderstanding occur in drawing the line of territory, said to have been caused by Sir RICHARD SCHOMBURGH, some years since, by order of the British Government. We trust it may have been well defined, and clearly understood, as, it may be relied on, a discovery of this nature renders a mile of land of a widely different consideration from a few thousand square miles of barren waste or rugged wilderness; the possession of which has, as now, brought about unpleasant difficulties and jealousies between nations. After the experience we have of the lax manner in which our territorial boundaries have been laid down in other quarters, where the true construction of the definitions have been discussed, rediscussed, surveyed, and resurveyed, and then obliged to be submitted to arbitration at last, we confess we shall be glad to find there is no mistake here, for every such will be claimed and disputed, if possible; this is a matter for instantaneous proof, as it would be unwise in our Government to allow any claims to be made without sufficient warranty, or to give up any rights in which they are by treaty entitled. We repeat, this should be immediately investigated, and made public.

In a national point of view it can hardly be over appreciated by England or France; to both it holds out glorious prospects of a brilliant future. The rapid development of commerce since the general peace had so absorbed the precious metals that a sterling medium was beginning to be sorely felt in all countries, when California providentially presented her vast resources. Many persons prophesied gold would decrease in value from plenitude; the increase of trade, from greater ability to its extension, took all the supposed excess, and gold not only maintained its price, but absolutely became more valuable for mercantile pursuits, when the world was almost startled out of its propriety by the Australian revelations; notwithstanding the prodigious remittances from that colony, all is needed for the purposes these discoveries have mainly opened up or materially aided.

It appears to be a natural law that riches, if distributed, tend solely to the national weal. We must remember every foreigner that digs them becomes, more or less, our customer, and, therefore, our benefit.

But for our Australian colony, New York bade fair to become the *emporium* for gold; and, undoubtedly, the province of California has been of great advantage to the American States. France, since that country has become settled, has made prodigious advances in trade, colonisation and the arts of peace, necessitating a greatly increased working capital of the precious metals. This discovery, therefore, is most opportune to her as well as to this country, where the unprecedented stimulus to her foreign traffic has scarcely had time to make its returns.

Now, should these reports be confirmed, and no misunderstanding take place, we hope we may realise the opposite of our ancient Latin proverb.

We publish in another column the result of Mr. CLEMENT's visit to a portion of the property proposed to be worked in the first instance by the *WEST OF IRELAND MINING COMPANY*. We need not here repeat what we are sure every reader who is interested in the development of the mineral resources of Ireland will pursue for his own satisfaction; but it is gratifying to find that Mr. CLEMENT confirms the statements so modestly set forth in the prospectus, and concurs with the scientific gentlemen who had previously reported on the district, that there is every reason to believe that a judicious expenditure of no very large amount of capital will result in the most satisfactory returns. Specimens of the ore brought by Mr. CLEMENT from the locality have been examined at the office of the company by persons of experience, and pronounced fully to warrant the expectations entertained of the workings, which we hope are soon to be commenced.

In noticing this company from time to time, we have referred with satisfaction to the generally improved and improving state of Ireland; in fact, we cannot separate the prospective success of such an enterprise from the consideration of the general well-being of the country. While we are not indifferent to the agricultural prosperity of Ireland, both as regards the tillage of the land and the breeding of cattle—to the cheering diminution of pauperism, the amount expended under the Poor Law Act being reduced from 1,167,000*l.* for the year ending September, 1851, to 576,390*l.* for the year ending September last, 1856, or more than one-half, including in the latter sum 220,000*l.*, the cost of establishments and the salaries of officers, leaving only 356,390*l.* for the maintenance of the poor—to the fact that the funded property was 5,000,000*l.* more last year than in 1851—that the Bank deposits and circulation increased proportionately—that the decrease of criminal offences is shown by the detention of under 4000 in custody in 1856, against 10,000 in 1851, and other unmistakable evidences of national progress—yet knowing it to be undoubtedly that Ireland possesses mineral wealth of vast amount and infinite variety, we desire to see that wealth developed and made available for the enrichment of the country and its people, and contributory to the general prosperity of the empire, as like resources have been, and are, on this side the Channel. We are, therefore, much interested in the success of such enterprises as those projected by the *West of Ireland Mining Company*; and when we believe them, as in this instance, to be undertaken from the most laudable motives, by judicious men, and likely to prove of as much value to the country as remunerative to the promoters, we deem it our duty to aid and countenance them by every means in our power.

The pressure felt by the producing classes of the commercial community from the high price of money has led to the establishment of the *CURRENCY AND BANK REFORM ASSOCIATION*, the object of which is to take such steps as may be deemed most advisable with regard to the present system of dealing with the Currency and Bank Charter questions. A preliminary meeting, presided over by Mr. WILLIAM MALINS, was held at the London Tavern on Thursday, at which it was stated that, although no one could deny we possess great wealth in the country, and that the moneyed interest are making large profits, the producing classes were suffering severely, and losing the profits which they should receive. The panic of 1847 was not caused by any want of capital in the country, but from the want of available and transferable capital. This assertion was made by one well able to judge in the matter—Mr. CORROX, Governor of the Bank of England in 1844, when the Charter was renewed, who distinctly stated it before the select committee of 1848. The alteration of the Charter in 1844 had the effect of excluding silver from the coffers of the Bank of England, and in the last six years but one purchase of silver had been made, and that of only 250*l.* It was an undeniable fact that no person could hold silver in this country but at a loss, and this arose from silver not being a legal tender. It must be remembered that 40*l.* was the limit, and that it was, therefore, comparatively valueless. It had really happened that a trader who required but 2000*l.* to meet his liabilities could only obtain that amount as a favour upon 20,000*l.* worth of silver; yet for every commercial purpose silver answered quite as well as gold. It was the interest of the Bank to keep the issue of notes as large as possible, as the rate of discount was then always high. It was a question for commercial men whether they were to go on seeing trade paralysed, and whether they were to suffer the money-lending interest to ride rough-shod over the producing classes. In Oct., 1847, the country had as nearly as possible reached a general stoppage of cash payment, and the system of barter must have commenced had not Lord JOHN RUSSELL and Sir CHAS. WOOD issued a letter, suspending the Bank Charter Act, and giving the Bank power to issue an additional 2,000,000*l.* of notes, and the difficulty was overcome. Previous to 1844, 6 per cent. was the highest rate of discount which had ever been paid, but since that time as much as 9*1/2* per cent. has been paid. The late Mr. ROTHSCHILD very justly remarked that, if money was made cheap in England, we should get the commerce of the world, but if it was made dear we should lose it.

Mr. BILL considered the question excited the greatest interest throughout the country, as trade was crippled by it being necessary to pay twice the price for money. If the legislation was at fault, he thought that they should struggle to get the law altered. For 150 years before 1840 the rate had never exceeded 5 per cent. We were living under the monetary legislation of Lord OVERTON, to whom, as being the instructor and adviser of Sir R. PENN, we owed the Bank Charter Act of 1844. He proposed, "That this meeting pledges itself to use every effort to form an association sufficiently powerful to resist the renewal of the Bank Charter Act of 1844, experience having demonstrated its injurious action upon railways, agriculture, shipping, mining, and wages, in every department of industry."

Mr. DUNCAN, in seconding the motion, which was carried unanimously, remarked that 17 persons were examined before the committee of 1848 and that of these only four were in favour of the Bill. The four in favour were the Governor and Deputy-Governor of the Bank of England, a Bank director, and Mr. JONES LTD. (now Lord OVERTON); while those against the Bill were Messrs. GLYN, QUANBY, PEASE, BURBROOK (who

represented the country banking interest), and others of equal experience and influence. Yet, notwithstanding the great preponderance of evidence against the measure, Sir CHARLES WOOD reported that from the evidence adduced it appeared desirable that the Charter should be renewed. He believed few would deny that Sir CHARLES WOOD ought to have been impeached for making such a report, it being contrary to the evidence taken. Mr. P. G. DODD moved a resolution for immediately petitioning that the Bank Committee might be a public one instead of a private one, so that the public might have the opportunity of analysing the evidence day by day, and thus prevent a recurrence of the proceedings of 1844.

Col. MACDONNELL seconded the motion, which was carried unanimously, and after a vote of thanks to the Chairman the meeting separated.

Much disappointment is felt at the non-arrival of the Australian mail, which was due, by telegraph, on the 2d inst. The advices by it from Melbourne will be to April 15, the day on which the Chambers were to assemble after the prorogation; and anxiety, therefore, is shown to know the views of the new ministry, as to the internal policy of the colony generally, especially on the paramount subject of railway intercourse. The programme of Mr. O'SHANNASSY is a document of much interest to the capitalists of this country; it is also desirable to learn the probability, or otherwise, of the continuance in power of the new executive, and which, necessarily, will be determined, more or less, by the result of the new elections. The impression is that it will be permanent. It enters into office and power under good auspices, inasmuch as there is evidently great public spirit in the members of the Government themselves, and a determination on the part of the colonists to support all matters which have for their object a desire to promote the prosperity of the colony.

On the question of railways, it is thought that the views of the Government will be to complete the two lines, to which their predecessors in office were compromised—namely, the Mount Alexander and the branch to Willsborough; but in all other points the extension of railways will be left to private enterprise. This impression is gathered, in a measure, from the remarks of Mr. O'SHANNASSY, when he notified to the Chambers his acceptance of the reins of Government. "The opinion of myself and colleagues," he said, "on the subject of railways, is that everything within the power of the Government should be done." This is considered in the sense we have mentioned, coupled as it is with the fact that the late ministry obtained sanction, by a majority of only one, of their unauthorised expenditure for railway plant and interference in railways; and the vote was agreed to on the tacit understanding that no future government would be permitted to quote it as a precedent; while, added to this, a declaration of censure had been expressed by the constituents of Capt. CLARKE, the Surveyor-General, as respected his general conduct in the House; it was this gentleman who was so instrumental in bringing the defunct government into the dilemma on the railway question. Altogether, therefore, it is argued, and apparently on sound data, that the carrying out of railways generally will be left for private enterprise, although it is possible that the Executive will complete the lines already mentioned: indeed, this seems imperative, inasmuch as there was no company to represent the undertakings or capital subscribed for their construction. Mr. WEST-SARTH, of Melbourne, now in England, expressed himself strongly at the Melbourne Chamber of Commerce, on the subject of Government interference in works which ought to be left to private energy. "I take the example of railways," said that gentleman. "In the case of our principal railway line—that projected in 1852 to Mount Alexander—the failure of private enterprise, through inauspicious monetary times, and inadequate arrangements at the outset, imposed a necessity on the Government to step into the breach. Railways we must have; but we have yet to understand that what was at first the result of a temporary necessity, is to be regarded as a measure of permanent policy, and that our main railway lines are to be both constructed and owned by the Government. This principle, I think, we cannot too strongly oppose. Proper regulations, imposed on private railway companies, can always protect the public, without the necessity of that combination of extravagance and jobbery—a Government proprietorship." Mr. FYFE, the member of the Legislative Council for Geelong, who voted with the present ministry, also remarks that, "the only way in which the Government could act justly towards the public was by getting the companies to construct the railways. He advocated the construction of railways by private enterprise, and the Government guaranteeing 5 or 6 per cent. interest on the capital." This is clear, not only as to the working of the railways, but also as to the guarantee from the state; and the fact that 6 per cent. is here mentioned, shows the disposition to secure interest to the subscribers of the capital—more approximate to the value of money in the colony than the 5 per cent. accorded to the Geelong and Melbourne Railway Company, and which has been found inadequate as an inducement to the colonists to embark in such undertakings. This latter circumstance cannot be better evidenced than in the case of the company just named, which, out of a capital of 350,000*l.*, had only 87,500*l.* held in the colony, and 262,500*l.* in England—at least, such was the state of affairs at the last meeting in July; and there is reason to believe that the present proportions are even still more different.

This fact is explained by Mr. THORNE, the President of the Geelong and Melbourne Railway, in the last report to the company, who remarks that "the current rates of interest in Australia are so much higher than those in Europe, that colonial capitalists can hardly be expected to invest their money in undertakings of which the interest of 5 per cent. guaranteed by the Government is the principal advantage. Other means of investment are continually occurring, by which larger returns may be secured in a perfectly safe and legitimate manner. The advantage of the Government guarantee, therefore, is to impart a sort of minimum value to the shares in the estimation of European capitalists as permanent investments." It is apparent, in fact, that this country is looked to for the supply of the necessary capital for the extension of railways in the Australian colonies; and it is only reasonable to suppose that the introduction of such capital will be encouraged by a liberal guarantee of minimum interest. On this point of capital held in England, it is argued, and justly, by the proprietors of the Geelong and Melbourne Railway shares, that this large sum of 262,500*l.*, out of 350,000*l.*, held on the London registry, is without any direct or legal control in this country, as the direction is entirely colonial, and they contend that their power here should be conformable to their interests; thus, in fact, requiring the transference of the board to London, and recognising and declaring that the safe and proper organisation of any company, when the capital is subscribed in England, is for the administration of its affairs to be vested in a London executive, with a local committee in the colony. A leading merchant in Victoria, aptly remarks on this subject, and says, that "if capital subscribed by English capitalists could be managed here (Melbourne) by a local board in banking institutions, surely the capital of railway companies could be managed similarly." As regards the rate of guarantee of interest on railway expenditure, another well-known colonist argues that the additional value given to Government lands along the lines would fully repay "for an excess of guarantee."

The only doubts which to our minds appear of any moment in this *questio vexata* of railways in Victoria is, whether the Government will sanction a line from Geelong to Ballarat, or from Melbourne to Ballarat. That antagonistic views influence the exertions of these two places, and their connected interest, is so well known that it scarcely needs comment, and a spirit of jealousy has always existed. Melbourne is the capital; but the Geelongites contend that their town ought to have been the capital, and hence an evident desire on the part of the latter to outstrip Melbourne in every possible way; while Melbourne interests are necessarily brought to bear against the efforts of Geelong. Both Mr. HAINES, the chief of the late government, and Mr. SLADEN, the late colonial treasurer, being Geelong men, used all their influence to promote the views of that place, but were always over-balanced by the weight of interests which Melbourne and its supporters brought to bear. Indeed, it is asserted that both these gentlemen were pledged to secure a Government line of railway from Geelong to Ballarat; but "it was an election bribe," says the editor of the *Melbourne Age*, "which the Legislature would not endorse."

It is, therefore, futile to suppose that the new ministry, under any circumstances, would construct a Government line from Geelong to Ballarat; and that, if a Ballarat line, as a national work, were undertaken, it would be from Melbourne direct; but as this would be such a gross injustice to the Geelong and Melbourne Railway Company, it is clear Mr. O'SHANNASSY will not risk his popularity by the adoption of such a scheme, consequently the formation of the railway will be left in private hands, and as there is no application before the Executive but that of the combined company of the Geelong, Ballarat, and North-Western, Geelong and Ballarat, it is only reasonable to suppose that the act of incorporation will be granted. In every sense it is a matter of much importance to the Geelong and Melbourne Company. Its anticipations of great profit are from the continu-

ation of the line to Ballarat, and by other projects, which will be either directly or indirectly connected with this undertaking. It is true that a large traffic exists between Geelong and Melbourne, and from this source alone it is estimated the shareholders will be recipients of 12 to 15 per cent. per annum, notwithstanding there is steam-boat competition; but when there are such auxiliaries as the line to Ballarat, and the projected Queenscliff and Geelong Railway and Port Phillip Dock Company, it is reasonable to suppose that the benefit accruing to the proprietary will be much more than the amount which is calculated upon from local traffic—indeed, it is impracticable to say the amount which may be received. Every arrival from these colonies brings evidence of the increasing prosperity, while the population is also getting rapidly greater. During the past week several vessels have reached this country laden with various descriptions of merchandise, the produce of these colonies, such as gold, copper, tallow, wool, hides, &c., while quite a fleet is on the sea, homeward bound, with similar cargoes. In our remarks of last week, on the Government statistical returns of the trade of this country with foreign and colonial ports, we showed that Australia stands third in the list of precedence, and absorbed no less than 2,493,666*l.* in the value of exports of articles the production and manufacture of Great Britain during the first three months of this year: and considering that experience shows the first three months to be equal to only a fifth of the annual trade, it follows that the exports to Australia is about 12,000,000*l.* sterling. This must have its effect in the colony; consequently it is impossible to determine the amount of business which will be carried on, and as the great movement is to the interior of Victoria, as regards passenger traffic especially, and from the interior to the coast as respects colonial shipments, which, in both cases, must in the greater part pass over the Geelong and Melbourne Railway, and its auxiliary lines, the benefit to accrue to the shareholders cannot be limited to anything like ordinary returns, even for the colony.

[FROM A CORRESPONDENT.]

We have already shown that in most instances the burden produced by the further taxation of mines, whether the rate be upon the mines themselves or upon the lords' dues, would ultimately fall upon the adventurers, and would therefore tend, in a great measure, to check mining enterprise. We shall now endeavour to prove that by the course which it is proposed to adopt—the rating of royalties—an entirely new channel for the levying of taxes will be opened, and that the question is, therefore, of the utmost importance to the whole community, whether connected with mining or not. In most mining leases it is made imperative upon the adventurers to pay all local taxes which may be laid upon the mine, and it would, therefore, become a question between the adventurer and the lord whether the tax upon the royalty was included in the terms of the lease, and therefore payable by the adventurer. The adventurer would argue that he had raised and sold the produce, and had paid the lord for it by the royalty, and that no tax was levied upon the mine or produce, but merely upon the rent which the lord derived from the sale of that produce—thus plainly showing that he has no right to pay the rate, especially, he might add, as each engaged upon the mine has already paid taxes equal to those paid by any other parishioner of similar station; so that the payment of rates upon the royalty would be paying the same tax twice.

But plausible as this argument might appear to the adventurer from his mode of viewing the matter, it would be found that the lord would have an equally forcible case, since he would very fairly contend that he agreed for a given royalty, free of local rates, and therefore that the adventurer was bound to pay the rate as well as the royalty, as otherwise he would lose as much of his royalty as the rate amounted to. The tax being levied upon the royalty is in fact a tax upon the produce of a mine, and as the produce of a mine, unlike much other produce, is part of the mine itself, and as the produce upon the mine shall be paid by the adventurer, it is evident that the lord is not liable for the tax upon royalties. The adventurer would endeavour to prove that the object of the bill was to tax profits derived from mines, and not the mine itself, since had the object been to tax the mine the tax would have been levied upon the mine in the same manner as it would be upon a factory, and that to tax the royalties for the purpose of drawing the rate from the mine would be as ridiculous as to tax goods sold by a manufacturer to obtain the rate upon the factory, with the exception that in this latter case the produce could be obtained year after year, whilst the produce of a mine can be obtained but once.

The lord, however, would have no greater difficulty in overthrowing this argument than the former. He would assert that the royalties which he receives cannot be included amongst those things which are rateable to local rates—the royalty being simply his profit, and that were he compelled to pay the poor-rate upon his profit he would pay his rate twice over, and would thus be called upon for a larger amount than any other trader. All might pay ten per cent. (income-tax) upon their profits, but he, in addition to the poor-rate paid upon his property, and which is paid by all traders, would be called upon for an additional poor-rate upon his profits. The lord and the trader pay their income-tax upon their profits—say ten per cent.—therefore they are equally taxed in this respect, and both pay poor-rate upon their property as they may possess, which is taxable to poor-rate, so that the burden is also equal in this. But the next calculation shows the injustice of taxing the lord's dues, unless the profits of every other trader be taxed in the same manner, which no one could think of. We will suppose the poor-rate to amount to 15 per cent., which is but a fraction more than 2*1/2* d. in the pound. Therefore, the manufacturer would pay 10 per cent. income-tax, and 15 per cent. poor-rate—25 per cent., whilst the lord would pay 10 per cent. income-tax, 15 per cent. poor-rate, and 15 per cent. poor-rate on profits—10 per cent., proving that the lord's taxes would be 70 per cent. higher than the manufacturer's, and as we have before shown that the pressure upon the adventurers would be very great; and few, we think, would deny that were mines called upon for 70 per cent. more taxes than any other class of property in the country the effect upon mining would be injurious in the extreme.

Such being the facts of the case, there can be little doubt that the passing of such a bill would be equivalent to raising the income-tax upon mine lords to 25 per cent., or 5*1/2* in the pound; and if this is permitted without opposition, the tax will soon be extended to others, and then even the promoters of the bill would complain. However, if mines must be rated, Mr. Roberton will have an opportunity of proving that he possesses the principle which he claims by advocating the rating of "land, in the growth of timber plantations and game preserves," as there would certainly be more justice in such a measure than in rating mines. Before, however, voting in favour of rating royalties let the Members consider that their plantations are also not rated, and that popular opinion will not permit the rich landowner to continue exempt from taxes while an industrious and useful class—the miner—is heavily burdened.

#### THE MINING AND INDUSTRIAL INTERESTS OF CORNWALL.

[FROM OUR CORRESPONDENT IN WEST CORNWALL.]

JUNE 4.—The mining share market has been inactive during the week; besides other causes, this is the Whitsun week, a time of holiday, when people attend more to pleasure than to business. The scarcity of money, and the high rates of interest, have latterly induced capitalists out of the county to lay out their money in other ways than in mine investments. In the county there are never wanting persons who will buy when there is any great and decided improvement; but, for some time past, with one or two exceptions, there have been no material improvements; and, consequently, shares generally have exhibited a tendency to decline. The standard giving way to some extent, has added to this tendency; and the result is, that there are now many excellent mines, dividend and progressive, the shares of which can be had at comparatively low prices, and offer to capitalists an excellent opportunity for investment.

The standard, though it has somewhat fallen, is still a very excellent one. Those who were concerned with copper mining previous to 1854, must recollect that the standard was very much lower for many years than it is now. Since then, our metallic exports have greatly increased, and the consequence is, we have had a better standard, and hope we shall have for a long period. A few weeks ago, many persons who watch the progress of the trade narrowly, were of opinion that there would be no reduction of fine copper below 12*1/2* per ton; but as the standard last week for western ores did not rally beyond the sale of the eastern ores in the previous week, it is seen that the tendency to decline is very decided, and it is, therefore, thought that the smelters may perhaps, as a temporary measure, not to last long, lower fine copper 1*d.* per lb. more, in order to stimulate an increased demand, and compete with the foreign copper. This view would appear to be strengthened by the Board of Trade returns last week published, which show that, although in exports of copper, wrought and unwrought, there was a small increase in declared value in the first four months of 1857, compared with the first four months of 1856; yet, when we come to look at the monthly returns, we find that the exports for April, 1857, were considerably below those for April, 1856. This is a fact which seems to confirm the opinion of those who considered that 13*1/2* per ton was too high a price for fine copper, and that if the smelters had kept it at 12*1/2*, they would have done a more steady, and, in the end, a more profitable trade. Be this as it may, the copper exports in April, 1857, fell considerably short of those in April, 1856; but as on April 29 there was a drop of 1*d.* per lb., or to 12*1/2* per ton for cake copper, it is hoped and expected that the next publication of the Board of Trade will show a considerable revival in this branch of our exports. But although the decline of our copper exports in April might seem to indicate the probability that the price of fine copper will be further reduced, for a temporary period; yet, against this consideration, we must bear in mind that the home trade has unquestionably of late improved. The reports from the Midland Counties seat of manufactures show that there is an active home trade at the present time in the brass foundry business, and in the various branches of copper and tin manufactures; and this active home trade may keep up the price of copper, and prevent the standard from falling to any considerable degree, as some persons might apprehend it.

would do, when they look at the falling off of the foreign copper trade in April. The price of ore copper at last week's ticketing was 97s. 12d. per ton, so that a further reduction of from 2s. to 3s. per ton would enable the smelters to sell fine copper at 117s. 10d., or 1d. per lb. less than at present, and still make their average profit. Mining adventurers will, therefore, closely watch the standard for the next few weeks; for if it declines below the present rate, they may conclude that fine copper will be further reduced 1d. per lb. But even should this be the case, there are good reasons for believing that the measure will be only a temporary one, and that shortly the price will again revert to 120s. per ton.

The amount of decline in the standard since Lady-day will be seen by the following figures:—

	Tons.	Standard.	Prod.	Price per ton.	Ore copper.
March 25	3876	£147 0	84	26 9 6	£103 10
April 30	3579	148 10	84	16 0	104 7
May 28	4233	142 9	84	5 19 6	97 12

The difference between the price given on March 26 and May 28 (allowing for the variance in produce) is 7s. 2d. per ton of ore. The difference between the sale on April 30 and May 28 is 8s. 4d. per ton. The increase in the number of tons sold on May 28 was chiefly caused by Great Wheal Busy coming into the ticketing with 379 tons.

Some persons apprehend that English tin will further decline, in anticipation of the Dutch sales; but, according to all accounts, the two recent reductions of prices, amounting to 6d. per ton, have led to considerable animation in the trade, and the foreign demand has so enormously increased for hollow tin wares, that even should there be any further decline, the tin miners may feel certain that it will be only of a temporary nature. The increased foreign demand for tin wares is very remarkable.

Wheal Bassett's account was held on Tuesday, when the same dividend

was paid as at last meeting (8d. per share), but the balance was reduced from 165s. to 1317s. The profit on the two months was 3930s. 10s. 5d. The stopes and pitches are producing about the usual quantities of ore. Great South Tolgoe has declined to 18s.; the mine, however, is looking very well. Several shares have lately come into the market from parties who are selling a portion of their interest—a practice which many pursue as soon as they can sell enough to realise their outlay, so as to have the remainder free of cost. South Frances shares are about 300s. West Seton, 300s. to 310s.; the mine is looking very well. A neighbouring sett, South Seton, has good indications in the lode, but it will take two years or upwards to erect an engine, and get to the depth contemplated. This mine and New Seton, adjoining West Seton, have excellent prospects of success when time has been taken for development. In North Frances shares have rather declined. Cook's Kitchen looks well, and several shares have changed hands at advanced prices. West Bassett still looks well in the bottom and western levels. South Tolgoe, from 140s. to 145s.; there is every probability of the mine improving in depth, but it must be a very substantial improvement to make shares rise at the present time. At West Stray Park, there are good prospects; and in Buller and Bassett United the engine-shaft is sinking on a lode with very good indications. Wheal Margery shares continue low, but after a time will, no doubt, rise again. Pendine is reported to have improved, and Tolvadden, in the Marazion district, is stated to have an excellent lode. Rosewarne United, 42s.; Alfred Consols, 18s. 10s. Some shares are again being purchased in Great Alfred, and prices are likely to improve. Several of the tin mines are doing well. Great Wheal Vor continues very productive on Wheal Metal lode.

The Cornwall Railway, which, when constructed, will give an impetus to the industrial interests of the county, it is now said will be ready for opening from Truro to Plymouth in August, 1858. The opening of the line will have to await the completion of the Royal Albert Bridge, over the Tamar, at Saltash, which will be one of the most magnificent tubular suspension bridges in the world. There are now 400 men employed on the works of this bridge, under the direction of Mr. Brunel, who has a staff of engineers on the spot. In about two months one of the immense tubes, with railway attached, will be ready for floating on enormous pontoons to its destined position, at one end to be supported by a pier erected in the centre of the river, where the water is 80 ft. deep, and at the other by a pier at the verge of low water on the Saltash side. The tube and railway will next have to be made for crossing the remaining part of the river. It is altogether a stupendous undertaking, but the misfortune is that the cost has greatly crippled the company, and the delay been greatly to their disadvantage, and against the interests of the whole county. Another route might have been taken, and the railway constructed at less cost, and been equally as efficient; this, at least, is the general opinion.

#### THE IRON AND COAL TRADES OF STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN WOLVERHAMPTON.]

JUNE 5.—The present week has been a general holiday, and, for the first part of it, the works were generally standing, the hundreds who usually occupy them having vacated their places at the mills, the forges and the furnaces, and taken themselves to the various places where attractions for holiday seekers had been provided. Thousands went by trips on the railways to various parts of the country—thousands more assembled within the beautiful enclosure of Dudley Castle—a green oasis within the region of smoke, slag-banks, coal pits, and iron-works, very properly designated “the black country” by our more fortunate neighbours who dwell in a clear atmosphere with a blue sky above and a green earth beneath them. Lord Ward permits the use of these grounds every year, and the old castle and its enclosure—the immense caverns formed by the excavation of the limestone brilliantly illuminated, with the beautiful grounds wooded and undulating, with deep chasms and lofty crags, never fail to attract thousands of the inhabitants of the district at these festive seasons, music, dancing, slight of hand, tumbling, fireworks, &c., being provided for their entertainment. On Monday a great addition was made to the population of Birmingham by the inhabitants of the neighbouring towns anxious to see the Duke of Cambridge, who visited that town to open the Caithorpe Park, spending the day following in inspecting its various manufactures, in which he showed great interest. Other attractions for pleasure seekers were offered, and never were they more generally taken advantage of—a proof of the prosperity of the mass of the population.

No particular change can be reported in the Iron Trade, which continues to exhibit a fair degree of activity, and the general trades of the district appear to be improving.

The perseverance with which M. F. de Lesseps has advocated the project of a ship canal across the Isthmus of Suez undoubtedly entitles him to the sympathy and good wishes of all earnest men, whatever opinion may be formed of the feasibility of the project. On Wednesday, Mr. D. A. Large, of London, addressed a meeting of the Birmingham Chamber of Commerce in support of the project, giving an account of the plan proposed, and advancing arguments to show the advantages which would result from its adoption. He acknowledged what has often been advanced in opposition to the scheme—that the canal would probably be chiefly used by steam vessels, as sailing vessels would find the track difficult, except in some parts of the year. The maximum freight proposed to be charged—10 frs. per ton—was considered high by many of those present, and the opposition of our Ambassador at Constantinople, Lord Stratford de Redcliffe, was referred to. The following resolution, approving of the project, but limiting the approval to its commercial aspect, was unanimously adopted, as the Chamber felt incompetent to give an opinion respecting the political considerations which might influence the English Government, and its able representative in the capital of Turkey:—

“That the chamber viewing the question of the advisability of a route across the Isthmus of Suez, as submitted to them by M. de Lesseps, and strictly in a commercial point of view, is of opinion it would be highly advantageous to this country if a safer and more speedy route between Europe and India could be carried out; that the proposed direct ship canal across the Isthmus of Suez appears to afford the facilities desired, and at the same time to supersede the circuitous and expensive route round the Cape of Good Hope, that it is most desirable that the impediment and delay consequent upon the trans-shipment of merchandise at any intermediate station should be avoided, as would be the case were the district to be traversed by a railway.” “That a memorial founded on the foregoing resolution, and recommending the project of a direct ship canal across the Isthmus of Suez to the favourable consideration of Government, be signed by the Vice-President on behalf of this chamber.”

The Birmingham Journal gives an analysis of the American Board of Trade returns for the year ending June 30, 1856, from which it appears that three-fourths of the pig-iron exported from this country to the United States is the produce of the Scotch Works; not more than 40,000 cwt. is imported from any other country, and of that quantity one-half is produced in Canada. Bar iron is imported from Sweden and Norway, but the entire supply from those and from all other countries does not amount to much more than a fifth of the quantity imported from England. Almost the entire supply of rod and hoop iron is obtained from this country, the small quantities of the former derived from Hamburg, and of the latter

from Russia, France, and Canada, being insignificant in comparison. Nearly all the sheet-iron imported is likewise the manufacture of this country, only a few hundred tons being obtained from Russia, Belgium, and Canada. With the exception of Canada, again, no other country exports railway iron to the United States, and the quantity received last year from Canada was only 187,089 cwt. From England, too, our transatlantic neighbours obtain their chief supply of steel, not more than 7000 or 8000 cwt. being imported from other countries, principally from Holland and Sweden. In all heavy articles of iron England meets with little competition, but Belgium exceeds her in the exportation of nails, so far as the markets of the United States are concerned. The great source of the American supply of copper is Chile, and in copper and brass manufacturers our trade with the United States is far exceeded by that of France. Copper wire is supplied entirely by Bremen, but the amount is small. Holland and India are the chief sources of the American supply of tin, and from France they obtain the largest amount of tin foil they import; but nearly all the tin plates and hollow wares imported are received from this country. England is also the sole source of their supply of lead pipe and manufacturers of lead, and of more than half the imports of shot and the unmanufactured metal. The latter is imported largely from France, and they receive considerable supplies of shot from Spain. Zinc in pigs is imported chiefly from Hamburg and Belgium, from which countries they receive most of their supply of the same metal in sheets; from Belgium they also import zinc nails. Jewellery to the value of \$231,348 was imported from England, and an almost equal amount from France. The chief supply of steel pens was from this country, being to the value of \$113,587 out of a total of \$116,155; and pins to the value of \$33,248 were imported from England, the total being \$40,255.

#### REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

JUNE 5.—There has been nothing this week but cheap trips, processions, club festivals, galas, and an infinite variety of amusements for the holiday makers. There has been little business done, and we have but little to say.

The Iron Trade is very healthy and the prospects for the summer highly encouraging. There has been a large number of orders given out from India and the continent, and the requirements for home consumption are not at all diminished. For railway tyres, wheels, and springs, and other railway iron work, there is a good demand, and plates have been more enquired after. Pig iron is advanced, and stocks low.

The Coal Trade is in about the same position as last reported.

There has been nothing material to notice this week in connection with the Derbyshire mines. The North Derbyshire Company are about commencing an exploration of the old workings, so that the company will begin to mine in earnest in a few days. Arrangements have been made with Col. Leslie, of Hussy's Hall, for opening out the old sough level, which will be done in a few days, and this will relieve the mines of a great quantity of water which they have a right to expect in their operations. The prospects of the company are exceedingly good, and their managers believe they have hit upon the same vein which is producing so much ore for the Eym Company. Specimens of the North Derbyshire and Eym ores have been compared by experienced geologists, who have pronounced confidently that they are from the same vein. The shares of the company are firm, and none can be had except at a premium.

Mr. G. Wilson, a Sheffield sharebroker, in last week's Journal, reported that North Derbyshire shares were firm at 2s. 6d. discount. We regard this as a careless inaccuracy, because Mr. Wilson should have known that offers were made on the Exchange to buy at a premium. We advise Mr. Wilson to be more careful in his distribution of information.

The Peak United Mining Company have made a call of 10s. per share, which would realise 250s. on 500 shares. The company are now in barren ground, but expect shortly to get into the vein again.

Although operations for recovering the remainder of the bodies at Lund Hill are prosecuted vigorously, but little progress is made on account of the devastation produced in the workings by the explosion. Several bodies have been recovered during the week. The bodies of S. Thorpe, and his hurrier, Arthur Dawson, were found locked in each other's arms, and they had to be separated before they could be got out. There have been 116 bodies recovered up to the present time.

#### STOCK, MINING, AND RAILWAY SHARES IN IRELAND.

[FROM OUR CORRESPONDENT IN DUBLIN.]

JUNE 4.—The stock and share markets have been very quiet this week, and prices have undergone scarcely any change. Business has been rather active in Government stocks, as also in leading railway shares. Mining shares were neglected and dull in tone. The following are the latest quotations:—Consols, 92s.; New Three per Cent., 92; Hibernian Bank (ex div.), 31s.; National Bank, 37; Royal Bank, 22s.; Patriotic Insurance, 7s.; Mining Company of Ireland, 15s.; Wicklow Copper Mine, 29; Belfast and Ballymena Railway (ex div.), 50s.; Cork and Bandon, 10s.; Belfast Junction, 42s.; Dublin and Wicklow, 5s.; Great Southern and Western, 103s.; Midland Great Western, 50s.; Waterford and Kilkenny, 4s.; Waterford and Limerick, 22s.

The meeting of the General Mining Company for Ireland, held on Monday, was very poorly attended, notwithstanding it was expected that matters of great importance, and such as would vitally affect the interests of the company, would have been brought under consideration—such as the reduction of the nominal capital, and the issue of new shares. It was found, however, that these propositions, though passed at a special meeting in April, could not be legally entertained, and the directors, therefore, were obliged to abandon the proposed alterations, which, could they have been carried, would, without any doubt, have seriously injured the property, as I endeavoured to show on a former occasion. The report of the directors was a fair document, and advocated strict economy in management, a thing much wanted in this company. The directors commence the retrenchment by reducing their own remuneration to 150s. per annum, instead of 250s. as before. The report does not hold out any very flattering hopes for the future; and we must, therefore, be dependent now on the chances of mining, which are, generally, very variable; but the agent at the mines looks for success the next half year.

The bog lands of Ireland, to which I have so frequently drawn your readers' attention, are well worthy, from their vast extent, of the most careful consideration, and scientific men are year after year engaged in devising plans for their reclamation, or in finding out new processes for the practical application of the peat to industrial purposes. This substance is found to be useful almost in proportion as it can be compressed; and this end has been so fully attained by Mr. J. J. Hays, of Kerry, that by that gentleman's process peat can be made as hard and dense as coal, and at such a trifling cost, that it will be placed quite antagonistic to coal as a heating medium. As Mr. Hays intends reading a paper on his process before one of the Dublin scientific societies, I will merely anticipate his remarks, by stating that according to his process the turf is first dried in the ordinary way; it is then ground in a mill to powder, and in this state it is perfectly dried. It is then run into moulds, and by a steam pressure equal to 1400 tons is pressed into blocks of 9 in. by 4 in., a specimen of which I possess. I will again more fully allude to this process.

MINING IN IRELAND.—At the Swansea Ticketing, on Tuesday, 840 tons

of copper ore, the produce of Irish mines, were sold, realising 10,475s.:—

Knockmahan Mines 458 tons £5906 3 8

Berehaven 296 " 3151 18 0

Holyford 53 " 1016 15 0

Cronebane 30 " 200 9 6

Tigrony 3 " 99 15 6

“The RATING OF ROYALTIES OF MINES.—The committee on this subject will meet to take evidence on Monday next. We are informed that the enquiry will be limited to the rating of royalties of mines.

BELGIAN IRON ORE.—The exports of iron ore from Belgium, during the four months ending April 30, 1857, amounted to 20,334,000 kilos.; whereas, during the corresponding period of last year, they only amounted to 4,289,400 kilos.; and the total exports of the year only to 15,577,800 kilos. Of the large quantity exported this year, France alone took more than 19,300,000 kilos. As 50 kilos. are about equal to 1 cwt., the exports for the four months have amounted to upwards of 20,000 tons.

MARINE ENGINEERING.—The U.S. paddle-wheel steam-frigate *Susquehanna* (now at Gravesend) has four tubular boilers fitted athwart ships, with upright tubes, the water lying around them. The boilers were constructed at Baltimore on a new plan by the chief engineer of the United States navy. Her average consumption of coal (of which she stows away 1000 tons) is about 25 tons for the 24 hours, which amount produces an average speed of 10 knots an hour under steam alone. Her cylinders are 6 ft. in diameter, 10 ft. stroke, carrying from 12 lbs. to 18 lbs. pressure of steam, 15 lbs. being the average; average revolutions, fifteen or sixteen.

#### NEW APPLICATION OF MANGANESE.

M. Brunner has communicated to the French Academy of Science the results of some experiments he has made relative to the reduction of the ores of manganese to the state of metal. Interest in the subject is increased by the recent discovery of the new metal, aluminium, the combination of which with other metals having given these matters quite a new character, and manganese may hereafter contribute to increase the circle of these new metals. The process and result are thus described:—“The reduction of the ores of manganese to metal is effected exactly in the same manner as aluminium. Half fill an earthen crucible with alternate layers of fluor-spar, soda, and ore of manganese, in thin layers of from 1-10th to 2-10th inch, by taking two portions of fluor-spar to one portion of soda, then press down the mixture with a pestle, so as to leave as little interstices as possible; cover it with a layer of dry common salt, about half the quantity of the mixture, and cover the whole with a layer of fluor-spar, broken in pieces the size of a pea. This last substance serves to prevent the mixture from being forced out of the crucible by the rather violent effect of the reaction. The crucible, thus charged and furnished with its cover, is placed in a blast or reverberatory furnace. The heat at first must be very low, gradually increasing to a bright red heat. Long before the incandescence of the crucible the reduction takes place. A hissing noise proceeding from the centre of the mass, and a yellow flame issuing from the crucible, indicates a favourable proceeding. This done, keep the fire up until it becomes red hot. A quarter of an hour will accomplish the reduction. The apparatus is allowed to cool, by closing up all openings in the furnace. To obtain the produce, break the crucible, and the metal will be found reduced in the shape of a single button at the bottom of the crucible. The quantity of metal is not obtained by the first fire, as shown by theory. The analysis of fluorine has for its composition the formula  $Mn F_3$ , from which (taking the figures of Regnault) 100 portions of sodium ought to dissolve 208.5 portions of fluorine to form 183.5 portions of fluoride of sodium, and furnish 120 parts of manganese. With a little more than the half of these proportions the operation ought to be satisfied. It sometimes occurs that the metal is not quite melted: in that case the contents of the crucible must be pounded in a steel mortar into small pieces, and then undergo a second fusion, by covering it with dry common salt, or dry potash, mixed with a tenth of nitrate of potash. Then, by the same process, the several small particles are united into one button.

Experience teaches that borax must not be used as a flux in the process, the metal evidently becoming impaired by its use. Manganese thus prepared possesses qualities essentially opposite to those commonly attributed to it. Its colour is that of cast-iron; it is brittle, and in no way resists the action of the hammer, or other mechanical forces. It is very hard and proof against a steel file, destroying, on the contrary, the hardest steel instrument. It is capable of taking the most perfect polish. It does not change when exposed to a temperature more than usually damp. It has been preserved in polished samples during two months in the atmosphere of a laboratory, surcharged at all times with various damp vapours, without the polish having in any way suffered by it. Heated on a sheet of platinum, it assumes very nearly the same hue as steel before attaining brown colour, by being covered with a layer of oxide. The specific gravity varies in different samples between 7.138 and 7.206.

It is not attracted by the magnet either when in a state of powder or metal. Acids affect it considerably. In concentrated sulphuric acid it gives, when cool, but a feeble issue of gas, which seems to be hydrogen proceeding from the water contained in the acid. Heated with the same acid, it produces sulphuric acid and dissolves. Weak sulphuric acid dissolves it rapidly. The same with hydrochloric acid, even when very much diluted with water; the same with acetic acid.

Undoubtedly manganese thus prepared will be applied to useful purposes. The hardness of the metal renders it suitable for mechanical purposes. An angular piece of the metal may advantageously be used in lieu of a diamond to cut glass, and even to work steel and other metals. Engravers will be able to profit by the use of it. The polish it is capable of taking renders it applicable for the mirrors of optical instruments. Although it cannot be wrought, it may be cast into moulds as easily as cast-iron; in fine, the alloys of this metal may easily be made use of. It would merit the attention of steel manufacturers, as it is known that all good steels contain certain quantities of manganese. It was even considered indispensable during some time to add cement powder matter containing the ores of this metal for the manufacture of steel. The valuable variety of steel known by the name of “wootsz” probably owes its origin to a similar addition. Skill and industry will decide many uses to which this now available metal may be used in the arts and sciences.

THE FURTHER GOLD DISCOVERIES.—Dubious as everybody was when the first news of Gold in California was announced, yet the circumstantial description of its discovery was so distinctly given, that the most incredulous hesitated; but when proof positive was afforded by producing the article itself, all the world ran wild after the Californian Eldorado. When the Australian discovery was first reported, the cautious shook their heads, and cried, “Ah, well, well! we shall have gold all over the world, after a time.” The excitement consequent on the amazing returns of the precious metal from that colony in so brief a period created a mania for gold discovery everywhere.—New Zealand, North, South, Central, and indeed, all parts of America were named—Ireland, Cornwall, Devon, Cumberland—Wales especially—in short, all parts were said to be abounding in auriferous deposits; that it existed in every variety of form, and in every diversity of formation; hosts of schemes were propounded, and many unwise speculators induced to embark in these visionary affairs. None, except the two great deposits alluded to, came before the world with that *prima facie* appearance of reality, as do the announcements of gold being found in unprecedented quantity and pure quality, in the British possessions of Guiana, and the French territory of Cayenne adjoining. Independently of the guarantee of truth conferred by the name of Her Majesty's Vice-Consul, Mr. Matheson, the descriptive details contained in letters published in the *Guiana Gazette*, in the *Demerara Colonist*, dated April 22, as well as the *Port of Spain (Trinidad) Gazette* of May 9, stamp the reports as of a sterling character. From them we gather the yield in the French territory was at the rate of 2 ozs. per man per day; the emigration, as may be supposed, was immediate and extensive. In the British dominions the discovery had been made about 90 miles from Upata, near which, some years

pretended, be the amount ever so great; the extension of trade will absorb all in useful employ, and we cannot but hail the news with the greatest satisfaction. We have also seen at a bullion merchant's in the city a beautiful nugget, with the quartz attached, from a place in Peru, said to be a recent discovery. The *Oliver Lang* packet-ship, which arrived at Liverpool on Thursday, brought some fine specimens of gold from New Zealand, and now of gold having been discovered at Massacre Bay, Nelson; the yield had not been large, but the prospects were extremely encouraging;—so that we really may reverse the generally received opinion of living in an iron age, for, verily, this is, *de facto*, a golden one.

Further accounts state that traditions of large deposits in the alluvial soil of the Yuraro have existed from time immemorial, but the actual discovery of their character and extent appears to have been first made by Dr. Piassard, French Vice-Counsel at Angostura, Venezuela, in 1849, by whom the fact was communicated to the Minister of the Interior. The Government forthwith notified that all diggers must pay one-fifth of their earnings to the State, but no further steps were taken, and as the district was wild and remote, and such as could be searched only by properly organised parties, little result arose. The accounts then given, however, by such few persons as from time to time engaged in the pursuit correspond with the facts now mentioned, that the gold is found in nuggets rather than in diffused particles, and that it is considerably purer than California gold, the difference being about 3½ per cent. Mr. Elias Gorin, of New York, obtained a grant from the Venezuelan Government for the exclusive working of a defined district, to be called the "Mine of the Yuraro," for 60 years, at a royalty of 10 per cent. on the net proceeds, and efforts were made to form a public company for its development with shareholders in New York, Paris, and London, the encouragement of immigration being also a feature of the project. But the disastrous termination of the various California and Australian gold companies was then fresh in the minds of all, and even if this had not been a sufficient obstacle, the degraded character of the Venezuelan Government, and its utter shamelessness and bad faith in matters of finance, would have entirely precluded European capitalists from joining any enterprise in that country.

**GOLD IN NEW ZEALAND.**—By the *Oliver Lang*, we have advices, apparently authentic, of the discovery of a rich gold field in the Aorere valley, near Maori Bay. The report says—"Every one acquainted with the gold fields in Australia who has seen those at Aorere is of opinion that richer indications have rarely been met with than those. The flakes of gold are disseminated so equally throughout the surface of the soil as to leave no doubt that far richer deposits will be found at the foot of the higher ranges. A nugget weighing 3 dwts. 12 grs. had been picked up accidentally in a stream on the eastern side of the province. Several parties of diggers had been formed and put into active operation. Their success had been somewhat variable, but still so far profitable as to lead to a reasonable presumption that far better things were to be expected. One intelligent digger says—"I would sooner take my chance on these than on the Melbourne diggings, being perfectly satisfied of the richness of the deposits here." Some of the gangs of diggers were making 14. a day per man. Mr. McGregor had undertaken a prospecting tour to the mountain ranges, and his report was looked for with great interest."

**THE COAL TRADE—THE GREAT WESTERN RAILWAY, AND THE FOREST OF DEAN.**—In the Court of Common Pleas, on Thursday, a rule was granted calling upon the Great Western Railway Company to show cause why a writ of injunction should not issue to prevent them from giving certain preferences to the Rusion Coal Company over persons possessing coal property in the Forest of Dean. The Rusion Coal Company (limited) was established about two years ago, and those registered as proprietors were—Mr. Goode, the manager of the engine department; Mr. Saunders, the son of the secretary; Mr. Thompson, a clerk, and some other persons, all in the employment of the Great Western Company; and it was believed that the whole of the capital of the company had been subscribed by the officials in the employ of that railway. The advantages which it was complained were allowed to the Rusion Company were—the use of bill heads and other articles of stationery; allowing their agents to be pased with advertisements of the coal company; allowing their issued from all their stations; the porters were also employed to unload the coals of the company, and weigh them into the customers' carts; the railway company allowed 50/- towards the payment of each collecting clerk of the Rusion Company, and the persons employed by the coal company were conveyed free on the Rusion Company, and the longer, was allowed to the Rusion Company to unload along the line: 45 hours, only 21 hours. The coals of the Rusion Company were allowed to be sold, whilst other traders had, for such distances as 56 miles, 45 miles, were carried 169 miles for 7s. 5d.; in the Forest of Dean. For the use of bill heads, &c., &c., 8d. was charged to the traders Rusion Company 50 per cent. less than the Great Western Company charged the and there were advantages granted to the Rusion Company in many other items. The system of preference was granted to the Rusion Company in many other items. Forest of Dean must be as such, indeed, that if it continued the traders in the driven out of the market.

**REPORTED DISCOVERY OF COAL IN SCINDE.**—The East Indian intelligence contains a statement of great importance. Two seams of coal, both at a moderate depth, have been discovered in Scinde. The locality is nearer to the sea than that of any coal hitherto found in India. In any case it will be valuable, as wood is rapidly disappearing. But if found suitable for steam purposes the results will be highly important to India, and advantageous to the mother country; for manufacturers will soon spring up, railroads be made, and an extensive commerce created.

**THE COLLIERY EXPLOSION IN MONMOUTHSHIRE.**—The adjourned inquest was held at Cwmthillery, before Mr. W. H. Brewer, deputy coroner, on the bodies of the 12 colliers who were killed by an explosion in Mr. John Russell's Tyr Nicholas Colliery, on Wednesday. The inquest was formally opened on Friday, when the jury were sworn, and immediately proceeded to view the bodies previous to interment. Those most injured it was necessary to bury without delay, and as soon after the identification as possible. The others were buried on Sunday, and a large crowd of people followed the unfortunate sufferers to the grave. Among the deceased are four single men, the rest being married, and have left in some cases seven children. The facts as before set forth in this Journal were detailed most graphically by the witnesses, who as it were escaped from the jaws of death, after which Mr. Herbert Mackworth, the Government Inspector of Mines for the district, deposed to the result of his examination of the colliery, finding fault with the rules for the guidance of the colliers, and also with the system of ventilation. He gave it as his decided opinion that the calamity would not have occurred had the use of safety lamps been rigidly enforced and adopted, and that all mines would be safe from explosions of gas were the "Davy" always in requisition. The jury consulted nearly half an hour, and then returned as their verdict that the whole of the deceased came by their deaths from fire and choke-damp in consequence of the negligence and recklessness of Samuel Merryfield. They also recommended the adoption of the rules sanctioned by the Secretary of State, as well as an improvement in the ventilation of the pit.

**THE LATE COLLIERY ACCIDENT AT INCHE.**—The inquest upon the bodies of seven of the men killed by this accident was held on Monday, when the jury, after deliberating for about half an hour, arrived at the unanimous verdict "That the deceased met their death accidentally in a coal mine by an explosion of gas, but that the explosion originated there was no evidence to show," and recommended the use of safety lamps in place of candles in the Hindley mine in future. [Full details of this accident appeared in the Journal last week.]

**BOILER EXPLOSION AT MANCHESTER.**—On Wednesday, the inhabitants of the district known as Red Bank were alarmed by a report so loud as to resemble the discharge of a park of artillery, and upon turning out to ascertain the cause, they found that a steam boiler had exploded on the premises of Messrs. Joseph and Mark Carter, where the chemical operation of tinning plates of iron is carried on. The shock was severely felt in the neighbourhood; but although the premises were a mass of wreck and ruin, none of the workmen appear to have been seriously injured.

**FEARFUL DEATH OF THREE PITMEN.**—George Lothard, John King, and J. Regan, met a fearful death in New Backworth Pit, Northumberland. The poor fellows were coming out of the pit in a cart, and on getting to the pit's mouth a companion stepped out of it, but had just got one foot on to the platform, when the hook of the cart slipped out of the rope that had drawn them up. He was caught by the banksman, but the three poor fellows were precipitated down the pit and dashed to pieces. The hook had not been properly fastened.

**RAILWAY REFORM.**—There was a large meeting of Railway Proprietors at the London Tavern on Wednesday (Mr. C. Vane in the chair), the object being to induce the Government to withhold all further concessions to railway branches and other useless competing lines, so as to improve the position of railway proprietors who have spent upwards of 300,000,000/- in that public convenience by which travel within the whole saved about 40,000,000/- a year. Such an interest ought to be protected by the Government, by their disowning further branches, and other useless competing lines of railway. It was stated that 300,000,000/- had been subscribed in this country for railway communication, and the proprietors now realised about 3 per cent., whilst foreign railway shareholders were earning their 5 or 10 per cent. on their investments. How was this? Hence the enquiry now about to be instituted on the subject. The French railway companies earned a large dividend, and no doubt this allusion was intended in the remarks of the Chairman, as a laudation of the French Government coming forward to assist the private efforts of individuals to effect a great public accommodation. We trust this remark will have its effect on our Government, and induce them to afford every facility to the present race of railway speculators, who seem to have laboured for futurity, looking at the permanent nature of railways as investments. Yesterday, in pursuance of the resolution passed at the meeting, a deputation waited upon the President and Vice-President of the Board of Trade to present the memorial. Mr. G. Haffield, M.P., introduced the deputation, and amongst those in attendance were Mr. Wickham, M.P., Mr. Ball, M.P., Mr. H. Pease, M.P., Mr. Coningham, M.P., Mr. Watkin, M.P., the Hon. H. Dutton, M.P., Mr. Crawshay Bailey, M.P., Sir W. Gore Ouseley, Bart., and several other gentlemen connected with the railway interest. After a long discussion, Lord Stanley promised to aid the deputation in the object in view.

**RAILWAY TRAFFIC.**—The Traffic Returns of the Railways in the United Kingdom for the week ending May 30, amounted to 487,580/-, and for the corresponding week of 1856 to 450,287/-, showing an increase of 28,293/- The gross receipts of the eight railways having their termini in the metropolis amounted for the week ending as above to 209,400/-; and for the corresponding week of last year to 204,411/-, showing an increase of 5019/-

The increase on the Great Northern amounted to 849/-; on the Great Western to 2266/-; on the London and North-Western to 254/-; and on the London and South-Western, to 1155/- total, 7154/- But from this must be deducted 75/- the decrease on the Eastern Counties; 30/- on the London and Blackwall; 1585/- on the London, Brighton, and South Coast; and 452/- on the South-Eastern; together, 2135/- leaving the increase as above, 5019/-

The receipts on the other lines in the United Kingdom amounted to 278,120/-, and for the corresponding period of 1856 to 254,846/- showing an increase of 23,274/- in the receipts of these lines, which added to that on the metropolitan lines makes the total increase 28,293/-, as compared with the corresponding week of 1856.

**THE CRUMLIN VIADUCT ON THE NEWPORT, ABERGAVENNY, AND HEREFORD RAILWAY.**—The viaduct has been formally opened: the height of the viaduct is 200 ft., and beneath runs the Western Valley line of the Monmouthshire Railway Company. The viaduct is almost wholly constructed of iron. The centre piers are composed of 140 cast-iron columns, each 17 ft. long and 12 in. in diameter, placed in tiers of 14 columns each. The heads of the columns are retained in their positions by cast-iron girders. The piers are 60 ft. by 30, tapering to 24 ft. by 16, the whole being laterally and vertically strengthened by a system of cross bracings. The top of each pier is surmounted by a frame of cast-iron, upon which the ends of the main girders rest. The entire super-structure consists of 16 spans of 130 feet each, which, with the approaches, makes it

length one-third of a mile. Over each span there are four main girders, covered by a platform of 6 in. planking, upon which the permanent way is laid. The first column was fixed in December 1855. The quantities of material used are—Wrought iron, 1300 tons, cast-iron, 1250 tons; masonry, 1, foundation and abutments, 800 cubic yards; timber, 25,000 cubic feet. The entire work has been carried out to the satisfaction of every one concerned by Mr. J. W. Kennard. The engineers were Messrs. Liddell and Gordon.

**THE LLANDILOWS AND NEWTOWN RAILWAY WORKS.**—The works are progressing satisfactorily; the rails have been purchased and the bridges and earthworks are in so forward a condition as to insure the opening in October. It is stated that the contractor has offered to lease the line at 8 per cent. on the capital expended so long as the line ends at Newtown, and by a rise each year of 1 per cent. until it reaches 10 per cent., when opened to Oswestry. So long as the terminus remains at Penstrowd the interest is to be 8 per cent. A special meeting of the shareholders is to be held to consider the offer.

#### WEEKLY LIST OF NEW PATENTS.

**GRANTS OF PROVISIONAL PROTECTION FOR SIX MONTHS.**—M. J. D. FARCOT, Port St. Ouen, Paris: Steam-hammer.—B. PREDAVALLE, Great Russell-street, Bedford-square: A new motive power.—P. WATKINS, Victoria Works, Smethwick, near Birmingham: Machinery for making rivets, bolts, and spikes. G. D. MALCOLM, Worcester-square: Improvements in the construction of buffing apparatus for railway carriages and carriages.—R. A. BROOM, Fleet-street: Preparation of steel and the steaming and manufacture of tyres, shafts, axles, and other forgings.—W. NEWTON, Chancery-lane: Improvements in furnaces specially adapted to the generation of steam for motive power, but applicable to furnaces for other purposes.—W. MASSY, Newport, Salop: Engines for the cultivation of land by steam power.—E. ELTON, City-road: Steam and Hot Water Works, Union-place, City-road: Manufacture and application of pipes for heating purposes.—A. FRIZZIBSON, Bath: Improvements in the form of valve for use in railway and tramways.—J. PEAK, Wigton: Manufacture of gas.—W. SISDON, and F. WHITRE, Kingston-upon-Hull: Steam ploughing machinery.—C. BARTON, Rotherham, and J. HARRIS, Macclesfield: Machinery for rolling tyres and hoops for railway and other wheels, and also other articles made of iron and steel.—J. BRADY and W. CRAVEN, Westgate Common Foundry, Wakefield: Machinery of apparatus for making bricks and tiles.—H. KNOX, High-street, and F. A. KNOX, Inner Temple: Lighting the public gas lamps in the cities and towns of Great Britain and Ireland by electricity, and for turning off and on the gas to same simultaneously.—J. ABSOR, R. H. THOMAS, J. YOUNG, and J. E. HUNT, Bilton: Machinery for blooming iron.—B. U. KEMP, Birmingham: Unions for gas-pipes and other pipes and tubes.—F. A. le COMTE de FONTAINE-MORSEAU, London, Paris, and Brussels: Improvements in the process for detaching or separating calcareous rocks.

—C. MURATOFF, Hotel de l'Europe: Obtaining a new sort of white, by silicate of magnesia and oxide of zinc, or by silicate of magnesia and carbonate of lead, in the first case a composition of zinc, and in the second a composition of lead.—P. M. PARSONS, Duke-street, Adelphi: Making moulds for casting railway chairs and other articles in metal, and an apparatus for that purpose.—F. WALTON and J. PINSON, Wolverhampton: New or improved machinery for stamping or raising metals.—W. GAXON, Birmingham: A new and improved nail, spike, or bolt, and machinery for manufacturing the same.—T. SILVER, Philadelphia, U.S.: Improved steam-engine governor.—S. C. SHEARD and G. UNDERWOOD, Yorkshire Works, Smethwick: Certain improvements in supplying boilers with water, generating steam, and consuming smoke, and which said improvements are applicable to marine, locomotive, stationary, and other boilers.—N. C. SZERELMEY, Bath-road, Peckham: Preparing combinations of materials for coating wooden and iron ships or vessels.—M. J. A. MILLER, Paris: Improvements in producing gas.—M. D. AUBERT, Paris: Fastenings for securing rails in the chairs.—W. E. NEWTON, Chancery-lane: Relieving the slide-valves of steam-engines from unnecessary pressure.

**COST OF POWER.**—From a comparison which has been instituted as to the cost of different means of producing power, it appears that for every shilling expended there may be raised by—

Manual power	600,000 lbs. one foot high in a day.
Horse power	3,600,000 ditto ditto
Steam power	56,000,000 ditto ditto
Electro-magnetism	900,000 ditto ditto

**LIGHTING COAL MINES WITH GAS.**—Capt. THOS. COOK, F.R.S., has invented an improved lamp, and apparatus connected therewith, for lighting coal mines with gas. The principle feature in the invention appears to be the forcing of air from the surface through the lamp, that the flame may be fed with the necessary amount of oxygen, and the fire-damp prevented from emerging. Two pipes are carried from the surface, one for gas and the other for air, and the lamp consists of two cylinders of glass set in a frame; the lamp being further protected by a globular gauze cap above the chimney. He proposes reflectors to throw the light into the narrow and intricate workings of the mine.

**NEW MINER'S LAMP.**—Mr. S. NIBBS, of Soho, Birmingham, the inventor of the People's Lamp, has succeeded in producing what he believes will prove a great boon to the miner—"safety lamp," which gives a good light, is rendered doubly safe, and will burn eight or twelve hours without trimming. The experience we have had of the excellence and utility of Mr. Nibbs's manufacture leads us to expect that he has been successful in his present endeavour; and we shall have pleasure in publishing the particulars of the practical experiments to which the Miner's Lamp is to be submitted, when we shall be enabled to express a more decided opinion upon its actual merits.

**TREATMENT OF ORES.**—Mr. T. E. WYCHE, CAMBERWELL, TO "disengage metals from the matrix" takes "the quartz or other substances in which the metals are embedded, and having broken the same into convenient pieces, puts them into a steam-tight boiler or other vessel with a quantity of water, and adds thereto sufficient caustic alkali. He then applies heat until the mixture boils, and continues the same under pressure as long as may be necessary to cause the alkali to act upon and dissolve the quartz or other matrix, leaving the metal free as a residuum." This plan is applicable to metals either in a state of oxide or acid, or in the native state."

**MANUFACTURE OF IRON AND STEEL.**—Sir F. C. KNOWLES, of LOVELL HILL, BERKS, has patented some improvements in the manufacture of iron. The first part of the invention relates to the preparation of fuel from wood, peat, coal, &c., by dry distillation. The second part is a modification of Mr. Nasmith's process of forcing gases through the molten metal. Atmospheric air, however, is in this instance used, and several tubes are admitted at the top of the furnace, and carried to near the bottom, to conduct the said air. The third part of the invention provides for the use of pure hydrogen, or carbureted hydrogen, by forcing them through the metal.

**MESSESS. WM. CLAY, OF LIVERPOOL, AND JOSIAH HARRIS, OF DOLGELLY, HAVE ALSO PATENTED IMPROVEMENTS FOR THE SAME PURPOSE.** They employ a circular trough, into which the molten metal is run, and into which there is suspended an air-tight circular chamber of lesser diameter; there is thus formed a kind of hydraulic joint, the molten metal taking the place of the water. A vacuum is created in the chamber; consequently, the air rushes under the walls thereof, and impregnates the metal with several tubes admitted at the top of the furnace, and carried to near the bottom, to conduct the said air. The fourth part of the invention relates to lubricating the crank pin of steam-engines, for which purpose a reservoir is adapted to the connecting rod, an aperture in which is in communication with the crank pin; such aperture, however, is capable of being opened or closed by a perforated disc or other such apparatus, which disc is turned at intervals by coming in contact with a tappet as it revolves.

**IRON AND STEEL.**—Mr. J. K. CHEETHAM, ROCHDALE, PROPOSES TO IMPROVE THE MANUFACTURE OF IRON AND STEEL, BY OXIDISING IRON BY ADMITTING AQUEOUS VAPOUR OR OTHER SOURCE OF OXYGEN THERETO WHEN IN HEATED STATE, BUT UNDER THE FUSING POINT, THAT IS TO SAY, BEFORE THE METAL BECOMES FLUID; IT IS THEN FUSED IN A MANNER WHICH PREVENTS THE METAL BECOMING LIQUID.

**ELECTRIC LIGHTS.**—Prof. Way has specified his improvements in obtaining light by electricity. Heretofore, in obtaining light by means of electricity, electrodes of charcoal have usually been employed, and motion has commonly been given to such electrodes by clockwork or otherwise, so as constantly to change their acting points; but even with this precaution it has been very difficult to obtain a constant light, in consequence of the want of uniformity in the electrodes. This invention consists in the use for one of the electrodes of a substance such as mercury, which is caused to flow through an orifice or orifices on to a point or points of steel or other material. The mercury is in connection with one of the poles of the battery, and the points are in connection with the other pole of the battery, and they are so arranged that the distance between them and the orifices on which the mercury escapes can be adjusted so as to bring the points to the level, at which the streams of mercury break into drops. In place of using points of steel or other material the electrodes may be surrounded by a glass to prevent the escape of mercurial fumes; means also may be provided for raising the mercury from the lower receiver, into which it falls, from the orifices to the upper receiver or cistern which supplies the jets. Prof. Way, in remarking on his invention, says—"I am aware it is not new to employ a stream of mercury as an electrode in apparatus for obtaining light by electricity. I do not, therefore, claim that neither do I claim the adjusting of an electrode by a screw or other mechanical apparatus when separately considered; but what I claim is the use of a flowing electrode of mercury in combination with apparatus for regulating the distance apart of the two electrodes; and I also claim the combination of a small over-flowing cup or regulated surface of mercury, as a second electrode with a flowing electrode of mercury in apparatus for obtaining light by electricity."

**SALT-PETRE.**—Mr. J. MACULLUM, of the KAMES GUNPOWDER MILLS, ARGYLL, PROPOSES TO IMPROVE THE PREPARATION OR REFINING OF SALT-PETRE: HIS INVENTION RELATES TO THE TREATMENT OF CRUDE NITRE OF THE SALT-PETRE OF COMMERCE IN SUCH MANNER AS HAS HITHERTO BEEN THE CASE. THE CRUDE SALT-PETRE IS FIRST OF ALL DEPOSITED IN A CHAMBER CONTAINING WATER, AND THE SALT-PETRE AND WATER ARE THEN AGITATED MECHANICALLY, EITHER BY AGITATING MACHINERY OR BY THE INTRODUCTION OF JETS OF AIR. WHEN THE CLEANSING PROCESS IS COMPLETED, OR IS IN ITS LATER STAGES AFTER THE BOILING OF THE MASS, THE NECESSARY COOLING FOR THE DEPOSITION OF CRYSTALS IS EFFECTED BY BRINGING MASSES OR CURRENTS OF COLD WATER INTO CONTACT WITH THE HOT LIQUOR. THIS COOLING TREATMENT HASTENS THE PROCESS OF MANUFACTURE VERY MATERIALLY. WHEN THE CRYSTALS ARE TO BE DRIED FOR USE THEY ARE REMOVED AND LAID UPON A PLATE OR TABLE HEATED BY STEAM OR HOT AIR PIPES, AND THIS DRYING COMPLETES THE ARTICLE FOR PACKING AND USE.

**MANGANESE ORES.**—Mr. T. A. COOK, of the WALKER ALKALI-WORKS, NEWCASTLE-ON-TYNE, HAS PATENTED SOME IMPROVEMENTS IN TREATING MANGANESE ORES. IRON AND OTHER FOREIGN MATTERS ARE MIXED WITH THESE ORES AND DRAFFED FROM THEIR VALUE. THIS INVENTION CONSISTS IN RIDING MANGANESE ORES FROM SUCH FOREIGN MATTERS BY SUBJECTION TO THE ACTION OF AN ACID. FOR THIS PURPOSE THE ORES ARE TREATED WITH AN ACID OF SUCH STRENGTH, THAT WHILE IT DISSOLVES OUT THE FOREIGN MATTERS, SUCH AS IRON, &c., IT DOES NOT ACT UPON OR AFFECT THE PEROXIDE OF MANGANESE. WEAK MURIATIC OR SULPHURIC ACID IS SUITED FOR THE PURPOSES OF THE INVENTION; BUT MR. COOK PREFERENCES TO USE THE RE-

SIDUAL PRODUCT OBTAINED IN MANUFACTURING CHLORINE FROM MARLIC ACID AND PEROXIDE OF MANGANESE. THIS PRODUCT IS NOW ALMOST VALUELESS, BUT IT CONTAINS SUFFICIENT FREE MURIATIC ACID TO BECOME AVAILABLE IN THIS PROCESS FOR THE PURIFICATION OF MANGANESE ORES.

**HYDRAULIC ENGINE.**—MR. L. ARNOUX, OF MARSEILLE, HAS INVENTED AN IMPROVED APPARATUS FOR PUMPING WATER OUT OF VESSELS. HE PRODUCES A VACUUM BY STEAM, WHICH IS IMMEDIATELY CONDENSED BY THE WATER RUSHING INTO THE CYLINDER—THE WATER THEN ISSUING FROM AN APERTURE PROVIDED FOR THE PURPOSE. IT IS SAID THAT 31 CUBIC METRES PER MINUTE CAN BE THUS RAISED, AND THAT THE PERFORMANCE IS EASIER THAN WITH THE COMMON PUMP.

**PURIFICATION OF GAS.**—MR. WM. GOSSAGE, OF WIDNES, PROPOSES THE SEPARATION OF THE HYDRO-SULPHURET OF AMMONIA AND SULPHURET OF HYDROGEN FROM COAL GAS, BY EMPLOYING SULPHURIC ACID,

IN CHANCERY.  
In the Matter of the JOINT-STOCK COMPANIES WINDING-UP ACTS, 1848 and 1849, and of the CWMDFYLE ROCK AND GREEN LAKE COPPER MINING COMPANY.

NOTICE IS HEREBY GIVEN, that ALL PARTIES claiming to be CREDITORS of the above-named company are, on or before the 10th day of June, 1857, to COME IN, and PROVE THEIR DEBTS before the Vice-Chancellor, Sir WILLIAM PAGE WOOD, the Judge of the High Court of Chancery, to whose court this matter is attached, at his chambers, No. 11, New-square, Lincoln's Inn, in the County of Middlesex; and until they shall so come in, they will be precluded from commencing or prosecuting any proceeding for the recovery of their debts; and notice is hereby further given that the said Judge has appointed Friday, the 12th day of June, 1857, at 12 o'clock at noon precisely, at his chambers, as before mentioned, for hearing and adjudicating upon the claims.

RICHARD BLOXAM, Chief Clerk.  
R. P. HARDING, 5, Serie-street, Lincoln's Inn, Official Manager.  
RICHARD CATTARS, 33, Mark-lane, Solicitor.

Dated this 29th day of May, 1857.

IN CHANCERY.  
In the Matter of the JOINT-STOCK COMPANIES WINDING-UP ACTS, 1848 and 1849, and of the CWMDFYLE ROCK AND GREEN LAKE COPPER MINING COMPANY.

TO BE SOLD, by direction of the Vice-Chancellor, Sir WILLIAM PAGE WOOD, the Judge to whose Court the winding-up of this company is attached, ALL that the RIGHT and INTEREST of the said company in the valuable LEAD and COPPER MINES, known as the CWMDFYLE ROCK AND GREEN LAKE COPPER MINING COMPANY, situate on the Snowden Mountain, in the parish of Rodegiedert, in the county of Carnarvon, together with ALL the valuable MACHINERY, PLANT, and MATERIALS, on the surfaces, belonging to the said company, at the said mines, subject to certain conditions of sale, copies of which may be had on application to the official manager, or his solicitors, from whom also permission to inspect the property may be obtained.

For further particulars, apply to Mr. ROBERT PALMER HARDING, the Official Manager, 5, Serie-street, Lincoln's Inn, London, by whom proposals in writing will be received up to 12 o'clock at noon on the 12th day of June, 1857, when, if the highest offer be approved by the said Judge, the person making such offer will be declared the purchaser.

RICHARD BLOXAM, Chief Clerk.

Dated this 28th day of May, 1857.

COKE AND CINDERS.—A MINERAL FIELD in LINLITHGOWSHIRE, of some hundred acres in extent, and about a mile distant from a mineral railway, containing one seam of SMITHY COAL, from 5 to 6 ft. in thickness, with several smaller seams of good quality, and all well adapted for the manufacture of COKE or CINDERS, is TO LET, in one or more portions. Two of the seams of coal rest upon good FIRE-CLAY, suitable for making ovens, or for any other purposes; and as this species of manufacture (for which the railways and other sources afford good markets) is but imperfectly understood in the north, it presents an advantageous opening for an experienced cinder burner.

There are also several seams of IRONSTONE, and a thick LIMESTONE post, in the same field, as well as a dense stratum of BITUMINOUS SHALE, any of which may be let with the above, or separately, as preferred.

For further particulars and terms, apply to the proprietor, ROBERT STUART, Esq., of Cardin, West Calder; THOMAS SPROT, Esq., W.S., Edinburgh; or Messrs. BALEH and WILLIAM MOORE, M.E., 24, St. Vincent's-place, Glasgow.

SOUTH DEVON GREAT CONSOLS MINING COMPANY.—Notice is hereby given, that the ORDINARY ANNUAL GENERAL MEETING of the shareholders of this company will be HELD on Wednesday, the 17th day of June next, at One o'clock in the afternoon precisely, at the London Tavern, Bishopsgate-street, in the City of London, for the following purposes:—namely, To receive a report from the directors, showing the present position and prospects of the undertaking; and to authorise the directors to raise the further capital required, by mortgage or otherwise, as may be deemed expedient.

By order of the Board, G. ANGUS, Sec.

\* Owing to the delay in procuring the necessary inspection of, and reports upon, the mine, the meeting will be held on the 18th June, at One o'clock in the afternoon precisely.

By order of the Committee, C. R. READ, Chairman, 47, Old Broad-street, London, May 27, 1857.

GREAT WHEAL VOR UNITED MINES.—Notice is hereby given, that the QUARTERLY GENERAL MEETING of the adventurers in the above mines will be HELD at their office, Gresham House, Old Broad-street, on Wednesday, the 17th June, at Two o'clock precisely. R. T. ALISON, Sec.

Gresham House, Old Broad-street, London, E.C., June 6, 1857.

TRELEIGH CONSOLIDATED MINES.—This company having been dissolved, and the mines, together with the engines and materials sold by public auction, in pursuance of a resolution passed at two Special General Meetings, held on the 20th and 24th of April last.—Notice is hereby given that a NEW COMPANY is in COURSE OF FORMATION, on the Cost-Book Principle, to consist of 5000 shares; and that at a recent meeting of the promoters of the new company it was resolved "That all shareholders in the old company shall have the option of taking the same number of shares in the new as they held in the old concern, and be considered to have paid 10s. per share on their shares, in full discharge of their interest in the assets of the old mine, provided they exercise such option within one calendar month from this date."

The shareholders in the old company who take an interest in the new will, therefore, have to pay 2s. 6d. per share in discharge of the first call. All such shareholders who are desirous of taking shares in the new concern are requested to signify their intention to the secretary and deposit with him their certificates of shares in the old company, and to pay the call of 2s. 6d. per share. Upwards of 4000 shares have already been taken up by the old proprietors. In the event of any shareholder declining to take an interest in the new concern, he will be entitled, upon the accounts of the old being made up, to receive his pro rata division of the net assets.

57, Old Broad-street, May 20, 1857.

W. NICHOLSON, Sec.

ST. JOHN DEL REY MINING COMPANY.—The TWENTY-SEVENTH ANNUAL GENERAL MEETING of the proprietors of the St. John del Rey Mining Company will be HELD at the company's office, 8, Tokenhouse-yard, on Friday, the 19th of June, at Two o'clock precisely. At this meeting, one director, H. W. Schneider, Esq., M.P., will go out by rotation, but is eligible to be re-elected.

JOHN HOCKIN, Managing Director, 8, Tokenhouse-yard, May 29, 1857.

QUEENANGEN MINING ASSOCIATION.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of this association will be HELD at the company's offices, No. 2, New Broad-street, on Friday, the 15th day of June inst., at Two o'clock in the afternoon precisely, for the purpose of confirming the following resolution, passed at an Extraordinary General Meeting of the said shareholders, which was held on the 5th day of May last:—

That the report now read be adopted and acted upon, with full power to the directors of this company to carry out the same upon such terms and conditions as they shall deem most advisable for the interest of the shareholders.

The following is an extract of the report to which the above resolution refers:—

"The proposition the directors recommend is that the 3000 shares of this company be amalgamated with the shares of the Aiten Mining Association, on such terms as the directors may find most desirable for the interests of the shareholders."

Dated June 1, 1857.

EDWARD J. COLE, Sec.

ANGLO-CALIFORNIAN GOLD MINING COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of this company will be HELD, as under, on Friday, the 12th day of June inst., at Two o'clock precisely, for the following purpose:—

To consider the position of the company—whether it shall be carried on, and by what means; or whether the effects of the company shall be disposed of, and the company dissolved.

Sir Henry V. Huntley and Mr. John Frankherd have been invited to attend.

By order, GEORGE F. GOODMAN, Sec.

Gresham House, Old Broad-street, June 3, 1857.

ASTURIAN MINING COMPANY (SOCIETE MINIERE ET METALLURGIQUE DES ASTURIAS).—M. LEON LILLO, banker, No. 9, Rue Bourdonnais, and Mr. CAMPBELL MACKENZIE, No. 63, Rue Ste. Anne, both of the City of Paris, acting as liquidators of the affairs of the above-named company, do hereby give notice, that, as a portion of the 100 francs per share, agreed to at the General Meeting of the 23d August, 1856, has been received by them, a FIRST INSTALMENT of ONE POUND FIFTEEN SHILLINGS per share will be PAID, on and after the 9th inst., by Mr. KENNETH MACKENZIE, 6, New Bank-buildings, Lombury, London, specially nominated at the said general meeting liquidator for the English shareholders.

And notice is hereby further given, that the said shares are required to be deposited at the office of the said Mr. KENNETH MACKENZIE one week in advance, for the purpose of being duly stamped, preparatory to such payment.

London, June, 1857.

THE GREAT BARRIER LAND, HARBOUR, AND MINING COMPANY (LIMITED).—In 10,000 shares, of 25 each. Deposit, 10s. per share at the time of application, and 20s. per share upon allotment. Prospectuses can be obtained at the office, No. 117, Bishopsgate-street, Within. J. H. MURCHISON, Sec.

MESSRS. FULLER AND CO., 51, THREADNEEDLE STREET, LONDON, continue to TRANACT BUSINESS in BANKING, MINING (both English and Foreign), RAILWAY, and every description of SECURITIES; and are in a position to BUY and SELL at the market price of the day.

The present favourable opportunity to capitalists command especial attention to mines, which are paying continuous dividends of from 15 to 25 per cent. Those of a progressive character, judiciously selected, frequently rising in value 50 per cent, and upwards.

WANTED.—Alfred Consols, Bedford United, Condurrow, Devon Great Consols, Gonsalena, Hington Down, Great Wheal Vor, Rhoswydol, Providence, South Bog, South Cadron, South Wh. Francis, Wh. Trellaway, Mary Ann, West Nanty-Mwyn. FOR SALE.—Bedford Consols, Drake Walls, Dylgwyn, Cilgaf, and Wentworth, Calstock Consols, Craddock Moor, East Russell, Gawton, Lady Bertha, Wh. Edward, West Russell, West Cadron. Office hours from Ten till Five o'clock.

UNITED STATES OF AMERICA.—DUPER, PERKINS, and SAYLES, BOSTON, MASSACHUSETTS, BROKERS for the PURCHASE and SALE of STATE, CITY, and RAILROAD SECURITIES, MANUFACTURING and BANK SHARES, give particular attention to the MINING COMPANIES OF LAKE SUPERIOR, and furnish reliable information concerning them. [DUPER, PERKINS, and SAYLES refer to the Editor of the Mining Journal.]

### YERLAND CONSOLS MINE, NEAR PLYMOUTH.

MR. HENRY WILLS WILL SELL, BY PUBLIC AUCTION, on Tuesday, the 25th day of June next, at YEOLAND CONSOLS MINE, the whole of the extensive and valuable MINING MACHINERY, MATERIALS, and other effects thereon, comprising One 36 in. ROTARY DOUBLE-ACTION STEAM-ENGINE, with 11 tons fly-wheel, wrought-iron shafts and sweep-rod, and two boilers, 10 and 9 tons each; two cast-iron stamps' axles, to carry 12 heads each, and 24 heads of stamps, with frames, &c.; one 22 in. double-action drawing engine, complete, with 10 tons boiler.

44 fms. 2 1/2 in. round iron rods, with 1/2 in. joints and pins, complete.

32 fms. 2 in. ditto ditto.

50 fms. 1 1/2 in. ditto ditto.

2 shaft-bobs, complete.

2 logging-bobs, complete.

8-arm capstan.

140 fms. 9 in. capstan-rope.

300 fms. contractors' metal.

1 shears, 42 ft., with shives, complete.

200 fms. 2 1/2 in. best chain.

200 fms. old chain.

14 fms. flat-rope pulleys and stands.

12 pulleys and stands for 2 1/2 in. rods.

8 pulleys and stands for 2 1/2 in. rods.

4 horse-whim pulleys, and 1 large capstan shive.

3 8 in. plunger-lifts, respectively 18 fms., 35 fms., and 30 fms.

1 8 in. drawing-lift, 12 fms. long.

1 7 in. drawing-lift, 19 fms. long.

1 4 in. drawing-lift, 10 fms. long.

100 fms. of 8 and 9 in. wood shaft, with plates, &c., complete.

300 fms. tram iron, 2 1/2 in., with saddles, 7 iron tram wagons, and 1 wooden ditto.

New and useful iron, about 7 tons.

Old iron, 5 tons.

Shed, 200 ft. by 7 ft.

Weighing machine, to weigh 1 ton.

10 ft. dressing kives.

3 round bobbins.

8 other bobbins.

8 tin dressing racks, with shed over.

Small water-wheel.

Wheel and hand barrows, and other dressing tools.

3 large tin chests.

Leather, oil, nails, hilt, &c.

, and may be had of the auctioneer, at his offices, 17 1/2, George-street, Plymouth, to whom applications may be made for further information. Dated Plymouth, May 20, 1857.

EAST WHEAL VOR, ADJOINING GREAT WHEAL VOR MINES. MAGNIFICENT ENGINE AND MATERIALS FOR SALE, NEARLY NEW.

MR. JOHN BURGESS is instructed to SELL, BY PUBLIC AUCTION, on Tuesday, the 16th day of June next, at Ten for Eleven precisely, the WHOLE of the MATERIALS on EAST WHEAL VOR, in Sithney, either together or in lots, comprising a 40 in. engine, 10 ft. stroke, equal beam, and about 11 tons boiler.

Shears, 60 ft. high.

8-arm capstan and 4-arm.

150 fms. 11 in. capstan-rope.

Balance-bob.

Horse-whim.

300 fms. 7-16 chain.

60 fms. 1 1/2 in. and 1 1/4 in. bucket rods.

70 fms. 8, 9, and 10 in. wood rods.

35 fms. 1 1/2 in. iron flat rods.

50 fms. ladders.

8 pairs sagged rod plates.

15 fms. 2 in. iron iron.

3 pairs caps and plates.

Iron work of two bobs.

4 horse-whim kibbles.

4 iron and flange bolts.

6, 8, and 9 in. prongs, staples and glands.

3 set-offs.

Taps and plates.

Screw-stocks.

Grinding-stone.

2 pairs faggots yokes, 9 and 10 in.

1 ditto, for 13 in. pump.

2 3 in. drop screws.

800 lbs. powder.

3 8 in. 9 ft. pumps.

Winch, 600 ft. whole timber, plank, and a variety of other articles, too numerous to mention in the limits of an advertisement.

Tin kievers, and all essentials to a tin mine.

For further particulars, apply to the auctioneer, Barnsley, Redruth.

Refreshments on the table before and after the sale.—May 20, 1857.

NOTICE OF SALE AT CUBERT UNITED MINES, on Monday and Tuesday, the 22d and 23d of June, 1857.

MR. JOHN BURGESS is instructed to SELL, BY PUBLIC AU

## THE MINING JOURNAL.

## PREVENT SMOKE AND INCREASE STEAM.—PATENT REGULATING AIR-DOOR, for MARINE and STATIONARY STEAM-BOILERS, and for LOCOMOTIVE and OTHER FURNACES.

"Persons left Victoria Docks with air apertures closed (i.e., action of invention suspended), steam fell in 30 minutes from 15 lbs. pressure to 13; smoke heavy for five minutes at each firing. Air apertures then opened; smoke suppressed in 30 seconds; and in ten minutes after adjustment of apertures steam blowing off at 15 lbs., and so maintained when pilot left on."

For further particulars respecting the Patent Regulating Air-Door, and the Patent Safety Marine Boiler; and with reference, also, to his Patent Land Furnaces, Domestic Stoves, and other inventions comprised in his System of Smoke Prevention, apply to Mr. JOHN LEE STEVENS, 1, Fish-street-hill, City, London (E. C.), where a great variety of models and drawings may be seen, and reports and testimonials obtained.

OVERLAND ROUTE.—STEAM TO INDIA AND CHINA, &c., VIA EGYPT.—The PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the MEDITERRANEAN, EGYPT, ADEN, BOMBAY, CEYLON, MADRAS, CALCUTTA, THE STRAITS, and CHINA, by their steamers leaving Southampton on the 4th and 20th of every month.

For further particulars, apply at the company's offices, No. 122, Leadenhall-street, London; and Oriental-place, Southampton.

MESSRS. R. & J. COUPE, ENGINEERS and IRONFOUNDERS, MANUFACTURERS of HORIZONTAL HIGH-PRESSURE STEAM-ENGINES, from 10 to 300-horse power; the larger description of engines mounted with their IMPROVED EQUILIBRIUM SLIDE PISTON VALVE, which has proved itself so eminently adapted for winding and other engines.

CLIFFORD.—STEAM-ENGINES ON SALE, of 8, 12, and 20-horse power. Strong made, portable, and being on the horizontal principle do not require expensive foundations or building. All, including governors and pump, fixed on the bed; valve motion and main coupling wrought-iron. The steam joints surfaced; the whole of the nuts, joint pins, studs, and small working parts, case hardened. Reference to engineers, mill owners, colliery proprietors, contractors, and others, who are working these engines.—A. ALEX. ELLIS (late Chas. Reece's Works), Clowes-street, Salford, Manchester (adjoins the Bonded Warehouses, near the lower end of Blackfriars-street).

TURBINES.—WILLIAMSON BROTHERS beg to draw attention to their TURBINE WATER-WHEELS, which are well suited for use wherever water-power is obtainable, and especially in MINING DISTRICTS. For high falls, they possess great advantages over the ordinary vertical wheel, can be erected at much less expense, require very little masonry, and, from their rapid revolution, the speed for driving machinery is obtained without gearing. Full particulars and testimonials may be had on application to

WILLIAMSON BROTHERS, Canal Ironworks, Kendal. Steam-Engines, Vertical Water-Wheels, &c.

THOS. GEMMELL AND CO., WIRE ROPE MANUFACTURERS, WORKS, FIRHILL ROAD, SPRINGBANK, GLASGOW. WAREHOUSES—Finnieston Quay, Glasgow; 10, King-street, Liverpool; 43, Marischal-street, Aberdeen; 40, Osborn-street, Hull.

HENRY J. MORTON and Co., 2, Basinghall-buildings, Leeds. GEORGE OSTRUM, Liverpool-road, Stoke-upon-Trent. ISAAC NAYLER, Dibdale, near Darley. J. WADDINGTON, 102, Millgate, Wigan. THOMAS REID, 33, Quayside, Newcastle-upon-Tyne.

PATENT WIRE ROPE, ONE-HALF THE COST OF HEMP ROPE.—HENRY J. MORTON AND CO.'S (No. 2, Basinghall-buildings, Leeds) PATENT WIRE ROPE, for the use of MINES, COLLIERIES, RAILWAYS, &c.; one-half the weight of hemp rope, and one-third the cost; one-third the weight of chains, and one-half the cost—in all deep mines these advantages are self-evident. References to most of the principal colliery owners in the kingdom.

GALVANISED SIGNAL CORDS AND KNOCKER LINES; will not rust or corrode, and not affected by the copper water in mines. Very strong, and not at all liable to break. Prices from 1s. per 100 yards.

CROGGON'S PATENT ASPHALTED ROOFING FELTS, 1d. per foot.

DRY HAIR BOILER FELTS, to SAVE COAL.

PATENT BOILER COMPOUND, for bad water.

FAIRBANK'S WEIGHING MACHINES, of all sizes.

GALVANISED IRON ROOFING AND SPOUTING.

PATENT FLEXIBLE STEAM PACKING, 1s. 4d. per lb.

PATENT METALLIC PACKING, 4s. per lb.

PATENT AMERICAN DRIVING BANDS, much cheaper and more durable than leather.

FLAX HOSE PIPES, for water, &c.

PATENT GALVANISED AIR-PIPES, for ventilation.

STOCK of MINING and RAILWAY STORES in Liverpool and London:—viz., OILS, GREASES, COTTON WASTE, SPUN YARN, WHITE LEAD, VARNISHES, &c.; and at very low prices.—Address, 2, Basinghall-buildings, Leeds.

N.B. Illustrated price list on application.

MOST IMPORTANT TO COLLERY OWNERS AND COLLERY MANAGERS.—HENRY J. MORTON AND CO., GALVANISED IRONWORKS, No. 2, Basinghall-buildings, Leeds, beg to call attention to their IMPROVED SIGNAL BELL, especially prepared to meet the requirements of the new Act for the Inspection of Coal Mines. It has met with the decided approval of many large colliery owners and managers. SIMPLE, EFFICIENT, and CHEAP. Price 1s. 10s. each.

BYRAM'S PATENT ANEMOMETER, for testing the ventilation.

Price 4s. 3d. to 4s. each.

STEAM PRESSURE GAUGES, very strong and accurate, £2 and £2 12s. 6d. each. For further information, apply to

H. J. MORTON AND CO., 2, Basinghall-buildings, Leeds.

FAIRBANK'S IMPROVED PATENT WEIGHING MACHINES, for the use of IRONWORKS, COLLIERIES, RAILWAYS, WAREHOUSES, STORES, &c. The most ACCURATE MACHINES in use, and the cheapest.

MACHINES of all sizes, from 1 cwt. to 30 tons, for RAILWAY WAGONS, CARTS, or WAGONS.—For prices and all other information, apply to HENRY J. MORTON and CO., Galvanised Ironworks, 2, Basinghall-buildings, Leeds.

Croggon's Patent Asphalted Roofing Felts, Boiler Felts, Galvanised Iron, &c., in Stock.

PATENT COMBINED GAS WORKS, of all sizes, for the use of PRIVATE HOUSES, MANSIONS, RAILWAY STATIONS, MILLS, COLLIERIES, VILLAGES, &c., FIXED COMPLETE, with greatly improved means for purifying, &c. Works of all sizes, from 10 lights to 500 lights, estimated for the construction is so simple, that the works can be entrusted to the management of an ordinary labourer or servant.

Apply to H. J. MORTON and Co., Galvanised Iron Works, 2, Basinghall-buildings, Leeds.

TO ENGINEERS, RAILWAY COMPANIES, STEAM PACKET COMPANIES, COLLERY OWNERS, MILL OWNERS, &c.—WARNE'S IMPROVED ANGLO-AMERICAN FLEXIBLE CANVAS, and MINERAL-INDIA RUBBER PACKING for STEAM JOINTS, PUMP CLACKS, VALVES, &c.

The art of all using steam-power is called to this elastic packing, possessing advantages which render it the cheapest in use. Reducing friction, saving time and labour, and lasting as many months as hemp or spun yarn will weeks. Price 1s. 4d. per pound, carriage paid.

Also, MINERALISED INDIA RUBBER HOSE PIPES, TUBINGS, MILL BANDS, and WASHERS. The attention of engineers, mill owners, machine makers, brewers, and others, is called to the above improved hose pipes and machine belting or mill bands, the important advantages of which, as regards durability, efficiency, and cheapness, are too well known and appreciated to need comment.

For lists of prices, apply to the agents, HENRY J. MORTON and Co., Galvanised Ironworks, 2, Basinghall-buildings, Leeds.

INDIA RUBBER WASHERS for JOINTS for steam, water, and gas, of all sizes.

CAST-STEEL SPADES, SHOVELS, AND PICKS, suitable for the MINING DISTRICTS at home or abroad, and recommended for their EXTREME LIGHTNESS and DURABILITY.—Manufactured by MESSRS. SPEAR AND JACKSON, Elm Works, Sheffield.

A SAY OFFICE AND LABORATORIES, DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT, LONDON. Conducted by JOHN MITCHELL, F.C.S., Author of "Manual of Practical Assaying," Metallurgical Papers, &c.

Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c. For amount of fees, apply to the office, as above.

THE BEST HYDRAULIC CEMENTS, PORTLAND, ROMAN, AND BATH; MADE FROM THE NATURAL CEMENT STONE, by the ORIGINAL INVENTORS AND MANUFACTURERS, FULLWOOD, THOMPSON, AND CO., "THE BRIDGWATER CEMENT WORKS," BRIDGWATER.

Can be relied upon for INVARIABLE REGULARITY of strength and colour. Prices.—Casks included, delivered (freight paid) at Cardiff, Newport, and most other ports in South Wales:—

Portland and Bath, per cask of 4 bushels..... 8s. 6d.

London, per cask of 4 bushels..... 7s. 6d.

And delivered to all other parts at proportional prices.

Reference permitted to Mr. D. LLEWELLYN, C.E., Consulting Mining Engineer, 10, King's Arms-yard, Moorgate-street, London, of whom samples, testimonials, and all further information may be obtained.

GLENFIELD PATENT STARCH. USED IN THE ROYAL LAUNDRY. AND PROFOUND BY HER MAJESTY'S LAUNDRESS TO BE THE FINEST STARCH SHE EVER USED. Sold by all chandlers, grocers, &c.

AN ACT OF GRATITUDE. Five Thousand Copies of a Medical Book for Gratuitous Circulation.

GEORGE THOMAS, Esq., having been EFFECTUALLY CURED of a NERVOUS DEBILITY, LOSS OF MEMORY, and DIMNESS OF SIGHT, resulting from the early errors of youth, by following the instructions given in a medical work by a physician, he considers it his duty, in gratitude to the author, and for the benefit of nervous sufferers, to publish the means used. He will, therefore, send free, to any address, in a sealed envelope on receipt of a directed envelope enclosing two stamps, to pre-pay postage, a copy of the medical work, containing every information required.—Address, G. Thomas, Esq., St. John's-lane, Newcastle-upon-Tyne.

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM. BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS, IN STOCK—FOR SALE OR HIRE.

BURGIN AND WEILS, STEEL CONVERTERS AND REFINERS, MANUFACTURERS OF RAILWAY CARRIAGE and WAGON SPRINGS, IMPROVED CAST-STEEL FILES, &c., HOLLIS CROFT STEEL WORKS, SHEFFIELD.

JOHN H. PECK, MANUFACTURER OF RAILWAY OIL COVERS, CART AND WAGON COVERS, OIL CLOTH, STACK COVERS, BOAT SHEETS, TARPAULIN, BRATICE CLOTH, COKE AND CORN SACKS, POTATO BAGS, TWINE, &c., WIGAN. LONDON AGENT.—T. E. WELLER, 15, Duke-street, Adelphi.

ROBERT MACLAREN AND CO., EGLINTON FOUNDRY, GLASGOW, MANUFACTURERS OF ALL SIZES OF CAST-IRON MAIN PIPES, FOR GAS AND WATER, by an improved patent.

GENERAL IRONFOUNDERS AND GAS ENGINEERS. MAKERS OF WROUGHT-IRON TUBES and FITTINGS. AGENTS IN LONDON.—A. MACLAREN AND CO., No. 174, Upper Thames-street.

BRYAN, McCRAKEN, AND CO., MERCHANTS, AND GENERAL COMMISSION AGENTS, NEWCASTLE-ON-TYNE. OFFICES, Three Indian Kings-court.

WILLIAM FOX AND SON, METAL AGENTS, No. 39, OLD HALL STREET, LIVERPOOL, SOLE AGENTS in LIVERPOOL for the SALE of the following makes of IRON:—

DAWES and SON'S, MILTON and ELLACAR. JOHN MARSHALL'S. PLANT and FISHER'S. BROUGHTON HALL. DANIEL ROSE'S.

EVERY DESCRIPTION OF IRON ALWAYS ON SALE. Also, TIN-PLATES, RIVETS, RAILWAY SPIKES, &c.

THE PERMANENT WAY COMPANY, being the proprietors of the most important PATENTED IMPROVEMENTS in PERMANENT WAY, which are adopted on upwards of 9000 miles of railways at home and abroad, continue to GRANT LICENSES for their USE, and to give every information to engineers as to cost of the different systems.

These improvements have for their object the safety of the public, the economy of maintenance, and the increased durability of the Permanent Way of railways; and their merits are now recognised by all the eminent engineers of the day, and sanctioned by the Officers of the Railway Department of the Board of Trade.

26, Great George-street, Westminster.

WILLIAM HOWDEN, See.

CALVERT'S PATENT PROCESS FOR MAKING COKE AND IRON FREE FROM SULPHUR. FOR LICENSES to USE the above process, apply to ROBERT LONGDON, Jun., 63, King-street, Manchester.

MUNTZ'S PATENT SOLID ROLLED BRASS TUBES, FOR LOCOMOTIVE AND MARINE BOILERS.

G. F. MUNTZ, Jun., begs to state, that, in consequence of the satisfactory results obtained during the five years these tubes have been in use, the following railway companies have entered into contracts to USE THE PATENT TUBES exclusively on all their lines, viz.:—

The London and North-Western Comp. The Lancashire and Yorkshire Company. The Midland Company.

These tubes are also very extensively used on all the other principal railways at home and abroad, and for marine purposes by Her Majesty's Navy and several of the leading steam-packet companies, and also by all the eminent engineers of the kingdom.

G. F. MUNTZ, Jun., takes this opportunity of stating that the tubes now manufactured are very superior, both in finish and quality, to those formerly produced in the early stage of the patent.—French Walls, Birmingham, April, 1857.

GEO. RICHARDSON and Co., Agents, 10, Craig's-court, Charing-cross, London.

NO IRON AND COAL MASTERS.—SUBSTITUTE FOR HORSES, by NELLSON'S PATENT MINERAL LOCOMOTIVE ENGINES, which now do work formerly done by horses, and also by FIXED ENGINES on inclines, giving great satisfaction to the proprietors, and effecting an immense saving over the old horse haulage system.

The engines are simple, compact, and durable, carrying their own water and coal, and running on four wheels, can go anywhere that an ordinary wagon can be put. The larger sizes of engines are made for the ordinary gauge, but the smaller engines are made for light rails, and of any gauge down to 32 in.

The following are some of the coal and iron works in Scotland, England, and Wales, where these engines are at work:—Glengarnock, Ardrie, Eglinton, Dalmellington, Firth, Clyde, Dowlas, Pontypool, Lilleshall, Grassmoor, Ebbw Vale, Coltness, Monkland, Omor, Gartsherrie, &c.

NEILSON AND CO., Locomotive Engine Makers, Glasgow.

TO ENGINEERS, BUILDERS, SHIP-BUILDERS, BOILER MAKERS, &c.—W. BLACKETT has continually IN STOCK, at the HOPE IRONWORKS, SOUTHWARK BRIDGE ROAD (close to Union-street), LONDON, a variety of ENGINEERING TOOLS, consisting of Large and Small Lathes, Drilling and Boring Machines, Shaping, Planing, Punching, and Shearing, Slotting, and screwing Machines, ready for delivery. May be seen on application.

N.B. Tools not in stock made to order.

TO MINERS, &c.—WALKER'S PATENT DRY STAMPING MACHINES, for REDUCING CROP and OTHER ORES to the proper size for market, WITHOUT WATER. These machines will be found invaluable for new mines, wherever water is scarce and labour dear.

Manufactory, 17, Copper-street, City-road.

GOLD ORES TREATED BY THE NEW PROCESS.—TO GOLD COMPANIES, AND TO THOSE INTERESTED THEREIN.—CALIFORNIA and AUSTRALIAN QUARTZ, showing no visible gold, yield, by the new method of treatment, from 50 to 120 ozs. of gold per ton; and practically proves that gold exists largely in quartz in a non-metallic state, the same ores, by the present system of treatment, not averaging one  $\frac{1}{2}$  oz. to the ton.

The shareholders of the Quartz Reduction, Anglo-Californian, Liberty, Waller, and especially those of the Quartz Rock Company, are invited to inspect ores from their mines which have been operated upon. And parties desirous of having the new system of gold extraction fairly tested may bring their own quartz for that purpose.

English and Foreign Ores carefully Assayed and Purchased, Mines and Gold Ores Calibrated, &c.

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## THE MINING SHARE LIST.

Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5120 Alred Consols (cop.), Phillack [S.E.] 25. 11s. 10d.	£18 1 <i>1</i>	17 <i>1</i> 17 <i>1</i> 1 <i>1</i>	£17 0 0	20 12 0	June 2, 1857.
1624 Ballewidden (tin), St. Just	11 <i>1</i>	4	8	12 5 0	0 5 0—Jan. 1, 1854.
4000 Bedford United (copper), Tavistock	2 <i>1</i> 6 <i>1</i> 4 <i>1</i>	8	8	8 8 0	0 7 0—May 20, 1857.
2400 Boscan (tin), St. Just	20 <i>1</i>	105	100 105	18 0 0	0 3 0—Dec. 13, 1844.
2000 Botallack (tin, copper), St. Just*	91 <i>1</i>	270	265 275	39 <i>1</i> 5 0	7 0 0—Apr. 21, 1857.
100 Brightside and Froggatt Grove, Derbyshire	50	65	60 80	8 0 0	3 0 0—Apr. 30, 1850.
180 Brynfall Hall (lead), Flint	20	80	60 80	13 0 0	3 0 0—July 31, 1859.
1800 Bryntall, Llanilloes, Montgomeryshire	7	8	2 <i>1</i> 3	0 2 0	0 2 0—July 30, 1856.
6000 Bwliw (silver-lead), Cardiganshire	8	1	1	0 2 0	0 2 0—July 1, 1856.
1000 Carn Brea (copper, tin), Illogan	13	32	30 32	25 0 0	2 0 0—May 22, 1857.
2040 Carnyorth (tin), St. Just	1 <i>1</i>	8 <i>1</i>	7 <i>1</i> 8 <i>1</i>	0 1 0	0 3 0—June 16, 1856.
200 Cefn Cwm Brynno (lead), Cardiganshire	8 <i>1</i>	5 <i>1</i>	3 0 0	3 0 0	0 4 0—Sept. 4, 1855.
1000 Colaccombe (copper)	10	52 <i>1</i>	50 52 <i>1</i>	2 0 0	1 0 0—May 28, 1857.
250 Conduffour (copper, tin), Camborne	20	160	130 160	83 0 0	4 0 0—April 8, 1857.
3000 Craven Moor, Limited (lead), Yorkshire	3 <i>1</i>	4	4	0 0 0	0 0 0—Feb. 28, 1856.
123 Cwmyntwith (lead), Cardiganshire	60	140	73 0 0	3 0 0	0 1 0—April 16, 1857.
280 Derwent Mines (silver-lead), Durham	30 <i>1</i> 4	150	104 50	10 0 0	0 0 0—Sept. 30, 1856.
1024 Devon Great Consols (cop.), Tavistock [S.E.] 1	462 <i>1</i>	475	568 6 <i>1</i>	12 0 0	0 0 0—May 22, 1857.
672 Ding Dong (tin), Gwiltav	32	17	16 7 6	1 10 0	0 0 0—Mar. 2, 1857.
175 Dolcoath (tin, copper), Camborne*	237 <i>1</i>	810	920 0 0	7 0 0	0 0 0—April 18, 1857.
12500 Drake Walls (tin, copper), Calstock	15. 12 <i>1</i>	2 <i>1</i> 2 <i>1</i>	0 11 5	0 3 0	0 3 0—May 8, 1857.
300 East Daren (lead), Cardiganshire	32	85	83 9 <i>1</i>	24 0 0	2 0 0—May 1, 1857.
128 East Pool (tin, copper), Pool, Illogan	24 <i>1</i>	340	260 0 0	7 10 0	0 0 0—Feb. 28, 1856.
1024 East Wheal Margaret (tin, copper)	6 <i>1</i>	9	9	0 5 0	0 5 0—Jan. 11, 1854.
5700 Exmouth (silver-lead)	4 <i>1</i> 1 <i>2</i>	8	3 10 0	0 2 0	0 2 0—April 22, 1857.
1400 Ryan Mining Company (lead), Derbyshire	5	60	60	12 19 4	1 0 0—May 28, 1857.
4000 Fowey Consols (copper), Tywardreath	4	7	4 1 4	0 8 0	0 8 0—Feb. 17, 1857.
4448 General Mining Co. for Ireland (cop., lead)	3 <i>1</i>	18	17 <i>1</i>	0 7 6	0 7 6—Dec. 31, 1852.
1024 Gonanera (copper), St. Cleer	13 <i>1</i>	18	17 <i>1</i>	2 0 0	2 0 0—May 8, 1857.
243 Grambler and St. Aubyn (copper)	10 <i>1</i> 2 <i>1</i>	100	100 105	0 6 8	0 4 0—April 21, 1857.
6000 Great South Tolga (S.E.)	3 <i>1</i>	19	17 18	0 5 0	0 5 0—Jan. 20, 1856.
20665 Great Wheal Vor (tin, cop.), Helston [S.E.]	7	5	4 <i>1</i> 5	0 5 0	0 5 0—Jan. 20, 1856.
119 Great Work (tin), Germany	100	140	231 10 0	7 10 0	0 0 0—Feb. 27, 1857.
1024 Herdieford (lead), near Liskeard	8 <i>1</i>	7 <i>1</i>	6 <i>1</i> 7 <i>1</i>	5 19 2	0 7 6—Apr. 19, 1854.
6000 Huntington Dore, Consols (copper), Calstock	8 <i>1</i>	4	2 16 0	0 2 0	0 2 0—Nov. 23, 1856.
2000 Holyford (copper), near Tipperary	11	8 <i>1</i>	4 2 5	0 5 0	0 5 0—Jan. 28, 1857.
25600 Isle of Man (Limited)*	25	42	52 17 3	1 10 0	0 0 0—Mar. 8, 1857.
78 Jamaica (lead), Mold, Flintshire	3 <i>1</i> 1 <i>2</i> 1 <i>3</i>	—	250 0 0	5 0 0	5 0 0—Mar. 10, 1851.
20 Laxey Mining Company, Isle of Man	100	1000	1370 0 0	20 0	0 0 0—Jan. 17, 1857.
160 Lovant (copper, tin), St. Just	5 <i>1</i>	8 <i>1</i>	80 8 <i>1</i>	1062 0 0	4 0 0—May 12, 1857.
5000 Lewis Mines (tin, copper), St. Erth	5 <i>1</i>	8 <i>1</i>	8 <i>1</i> 5 <i>1</i>	0 10 0	0 10 0—Dec. 30, 1855.
400 Llisburne (lead), Cardiganshire, Wales	18 <i>1</i>	12 <i>1</i> 2 <i>1</i>	238 0 0	2 0 0	0 0 0—April 22, 1857.
6000 Marke Valley (copper), Cardon	1 <i>1</i> 1 <i>2</i> 1 <i>3</i>	3	2 <i>1</i> 3	0 5 6	0 3 0—Sept. 7, 1857.
8000 Mendip Hills (lead), Somerset	3 <i>1</i>	1 <i>1</i>	1 <i>1</i> 1 <i>1</i>	1 7 6	0 5 0—May 29, 1857.
20500 Mining Co. of Ireland (copper, lead, coal)	7	15 <i>1</i>	15 <i>1</i>	11 0 0	0 2 0—June 22, 1857.
3000 Nantose (copper), Illogan	1 <i>1</i>	1 <i>1</i>	1 <i>1</i> 1 <i>1</i>	12 5 0	0 10 0—Jan. 1, 1857.
7500 Nantlle Vale (slate), Llanllyfni	1 <i>1</i>	1 <i>1</i>	1 <i>1</i> 1 <i>1</i>	0 1 5	0 1 5—Oct. 20, 1854.
6000 Nether Heath, Westmoreland	2 <i>1</i>	1	1 <i>1</i> 1 <i>1</i>	0 2 0	0 1 0—May 21, 1856.
200 Newtowlands Mining Company, Co. Down	30	35	48 0 0	1 0 0	0 0 0—Oct. 17, 1856.
140 North Roskem (copper, tin), Pool	23 <i>1</i>	70	60 70	324 0 0	2 0 0—Dec. 26, 1854.
6000 North Roskem (copper), Camborne	10	110	249 10 0	4 0 0	0 0 0—Sept. 26, 1853.
6100 Paz Consols (copper), St. Blazey [S.E.]	1 <i>1</i>	21	19 <i>1</i> 20	12 13 0	0 10 0—April 22, 1857.
500 Peak United (lead), North Derbyshire	1 <i>1</i>	23	22 <i>1</i> 23	28 4 0	1 5 0—Mar. 3, 1857.
200 Phoenix (copper, tin), Linkinhorne	100	365	224 10 0	20 0	0 0 0—May 18, 1857.
500 Peirther (tin, St. Agnes (Preferential))	15	75	72 <i>1</i> 75	62 4 8	3 0 0—May 20, 1857.
25000 Providence Mines (tin), Uay Lelant	20 <i>1</i> 1 <i>2</i> 2 <i>1</i>	12	12	0 7 0	0 3 0—June 8, 1856.
512 Rosewarne and Bacheldior (lead)	11 <i>1</i>	45	44 4 <i>1</i>	31 0 0	1 0 0—April 15, 1857.
12000 Sortridge Consols (cop.), Whitechurch [S.E.]	6 <i>1</i>	2 <i>1</i>	1 <i>1</i> 2	0 7 6	0 2 0—Oct. 28, 1856.
256 South Cadron (copper), St. Cleer [S.E.]	2 <i>1</i>	345	340 345	466 0 0	10 0 0—May 26, 1857.
123 South Crianlar (copper), St. Austell	19	285	285	60 0 0	20 0—June 18, 1855.
242 South Tolgus (copper), Redruth, Cornwall	16	145	140 145	74 0 0	3 0 0—Mar. 20, 1857.
242 South Wheal Frances, Illogan [S.E.]	18 <i>1</i> 1 <i>2</i> 1 <i>3</i>	310	310 320	253 0 0	10 0—May 4, 1857.
1024 Spears Consols (tin), St. Just, Cornwall	3	4 <i>1</i>	8 8 6	0 2 6	0 2 6—Dec. 10, 1853.
240 Spears Moor (tin), St. Just	23 <i>1</i> 7 <i>1</i> 8 <i>1</i>	4	4 5 0	0 10 0—June 18, 1856.	
579 St. Aubyn and Grylls (cop., tin), Bragea	5 <i>1</i> 1 <i>2</i> 1 <i>3</i>	1 <i>1</i> 1 <i>1</i>	0 17 6	0 7 8—April 1, 1857.	
20000 St. Day United (tin and copper)	2	1 <i>1</i>	1 <i>1</i> 1 <i>1</i>	0 1 6	0 2 0—Feb. 28, 1856.
94 St. Ives Consols (tin, St. Ives)	80	180	180 ad	1000 0 0	7 0 0—May 19, 1857.
9900 Tamar Consols (sil.-lead), Bealston [S.E.]	4 <i>1</i>	1 <i>1</i>	1 <i>1</i> 1 <i>1</i>	4 13 6	0 2 6—Feb. 7, 1856.
6000 Tincroft (copper, tin), Pool, Illogan [S.E.]	9	4 <i>1</i>	4 <i>1</i>	8 3 6	0 3 0—April 13, 1857.
2048 Trehearn (silver-lead), Menheniot	11 <i>1</i>	20	19 <i>1</i> 20	1 <i>1</i> 1 <i>1</i>	0 1 0—Feb. 29, 1855.
12500 Treseavan (copper), Gwennap, Cornwall	11 <i>1</i>	65	55 65	4677 15 0	5 0 0—June 4, 1854.
12000 Trethellan (copper), Gwennap, Cornwall	15 <i>1</i>	20	18 <i>1</i> 20	403 13 6	2 10 0—Apr. 29, 1851.
4000 Tretoill (copper, tin), Bodmin	12 <i>1</i>	3	0 5 0	0 5 0	0 5 0—July 8, 1856.
4095 Trewthwaite (silver-lead), Menheniot, Cornwall	2 <i>1</i>	50	39 0 0	5 0 0	5 0 0—Dec. 20, 1854.
100 Trumpet Consols (tin), near Helston	95	450	450	0 2 4	0 1 8—Jan. 14, 1856.
400 United Mines (copper), Oweynan [S.E.]	40	200	150 175	61 5 0	2 0 0—Feb. 12, 1856.
20000 Vale of Towy (lead), Carmarthenshire [S.E.]	3 <i>1</i>	2	0 3 3	0 1 3	0 1 3—May 8, 1856.
16500 Welsh Potosi (silver-lead), Tal-y-bont, Card.	3	—	1 <i>1</i> 0	0 5 0	0 5 0—July 16, 1855.
20000 Ditto (New Shares of 5 <i>1</i> each)	3	3 <i>1</i>	0 12 0	0 3 0	0 3 0—July 16, 1855.
6000 West Bassett (copper), Illogan [S.E.]	1 <i>1</i>	30	29 30	10 17 2	0 16 0—May 19, 1857.
256 West Cadron (copper), Liskeard [S.E.]	1 <i>1</i>	140	281 5 0	3 0 0—May 20, 1857.	
256 West Damsl (copper), Gwennap	1 <i>1</i> 1 <i>2</i>	150	149 150	20 0 0	2 0 0—May 18, 1857.
1024 West Providence (tin), St. Erth	1 <i>1</i> 1 <i>2</i> 1 <i>3</i>	13	11 13	38 1 9	0 10 0—April 8, 1857.
4000 West Wheal Seton (copper), Camborne*	8 <i>1</i>	323	315 825	69 10 0	0 8 0—April 15, 1857.
240 Wheal Arthur (copper), Calstock	8	4	4 0	6 10 0	0 10 0—Oct. 25, 1855.
512 Wheal Bal (tin), St. Just	6	5	2 0	0 0	0 0 0—June 4, 1854.
512 Wheal Bassett (copper), Illogan [S.E.]	3 <i>1</i>	270	265 270	455 10 0	3 0 0—June 2, 1857.
512 Wheal Charlotte, Perranporth	3 <i>1</i> </td				